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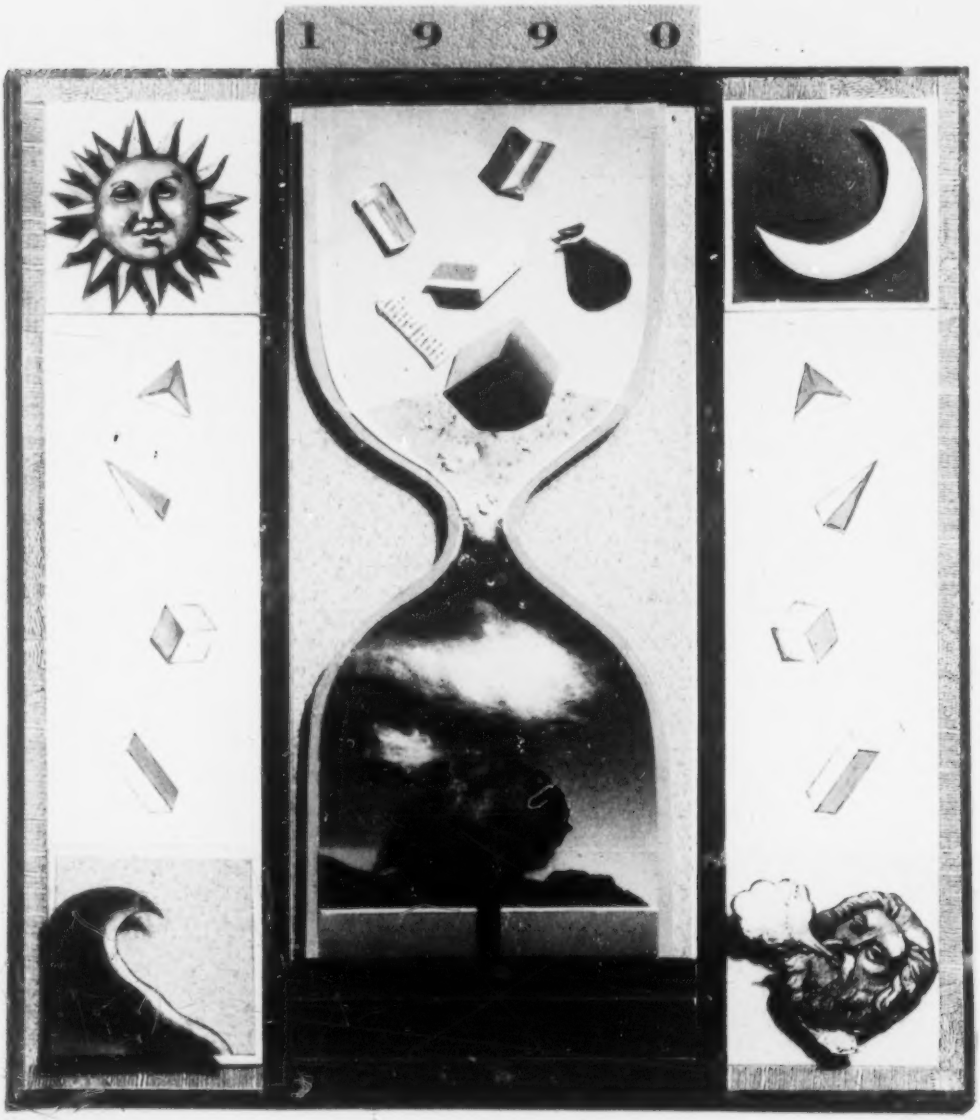
The Green Shopping Revolution:

How Solid Waste Issues Are Affecting Consumer Behavior



FOOD MARKETING INSTITUTE

Better Homes and Gardens®

The Green Shopping Revolution:

How Solid Waste Issues Are Affecting Consumer Behavior

1990

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The Food Marketing Institute (FMI) is a nonprofit association conducting programs in research, education and public affairs on behalf of its 1,600 members — food retailers and wholesalers and their customers in the United States and around the world. FMI's domestic member companies operate approximately 19,000 retail food stores with a combined annual sales volume of $180 billion — more than half of all grocery sales in the United States. FMI's retail membership is composed of large multi-store chains, small regional firms and independent supermarkets. Its international membership includes more than 210 members from over 55 nations.

The Green Shopping Revolution:

How Solid Waste Issues Are Affecting Consumer Behavior

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Introduction

Throughout 1989, it became apparent that the 90's would be a decade of environmental issues. As reports on the issues proliferated, there was growing dissatisfaction among consumers, and confusion regarding where they stand on environmental issues.

In the grocery industry, the consumers' attitudes were raising new questions for retailers. How should retailers respond to solid waste issues? What do consumers want grocery retailers to do?

Consequently, some of the leading grocery chains began developing 'environmentally friendly' products and practices. Will this trend continue, or is it not really what the consumers want?

This study was developed to address the expectations of the consumer, as they pertain to supermarkets and food packaging.

This study is the result of 750 telephone interviews and an additional 391 mall intercept interviews with respondents who met the following criteria:

- Primary food shopper for their household
- 18 years or older

Questions in this study address several issues regarding garbage and solid waste, and can be grouped into two main categories:

- Respondent's attitude toward waste disposal
- Respondent's practices in waste disposal

Additional copies of this study are available. Supermarket personnel may obtain these from the Food Marketing Institute and manufacturers from Better Homes and Gardens Magazine.

Special Notes

Most charts are based on the 750 telephone interviews or the 391 mall intercept interviews or a subsample as noted on the chart. The percentages on each table are calculated on the base noted. These percentages may not add to 100% due to rounding or multiple responses.

In the text, when the percentages are noted for a respondent, it is assumed that the survey participant is speaking for his or her household only.

More specific information on the study, the methodology, respondent profile, and sampling tolerances are found at the end of this study.

Executive Summary

Garbage and solid waste disposal is considered a more serious problem in America than nuclear safety, food safety and national defense. The garbage problem is not viewed as seriously as problems with drugs, crime, the cost of health care, homelessness and poverty, the federal deficit and air and water pollution. The garbage problem is seen as being on a par with the problem of education in America.

Nearly half of all respondents put newspapers out with the trash, 69% put out cardboard, over 75% of all shoppers include plastic containers in their trash, and over one-third throw away aluminum cans.

Shoppers' recycling activities are hindered by two main obstacles. First, many of the respondents don't know where to take their recyclable materials. Secondly, a large proportion of the populace doesn't know which items can be recycled.

Very few shoppers reported that recycling is mandatory in their community. The awareness of voluntary recycling programs varies for different materials and is highest for cans and bottles and lowest for plastics. When given a choice of types of recycling programs, the majority of shoppers preferred curbside recycling over a conveniently located recycling center.

Consumer and environmental groups are seen as the most reliable sources for recycling information, and only 11% of all shoppers said they would like to receive recycling information from grocery retailers. The respondents told us that if they were to receive recycling information from grocers, the most useful vehicle for them would be information printed on individual packages.

Over one-third of the shoppers indicated that they would not be influenced by a product label which indicated that the package was made from recycled materials. However, among those who could be influenced by package labeling, over 40% said they would be positively influenced to purchase a food product in recycled packaging, and about half would be more inclined to purchase a non-food product in recycled packaging.

Most shoppers were not aware of products in the supermarket which have been packaged in recycled materials. If they were aware, the item mentioned most often as being in a recycled package was breakfast cereal.

Over half of the shoppers surveyed indicated a positive intent to switch to a supermarket which promoted environmentally friendly products and practices. Twelve percent said they

would "Definitely" change stores, and an additional 47% said they would "Probably" change stores.

Over three-quarters of the shoppers interviewed said they have both paper and plastic grocery bags available to them at their supermarket. Paper bags are generally preferred over plastic bags.

When given the advantages and disadvantages of alternative types of packaging, the mall respondents interviewed made the following choices:

- Paper grocery bags were preferred over plastic bags
- Large size powder and liquid laundry detergent packages were chosen over concentrates and refills
- Large size frozen food packages were chosen over single serve size
- Plastic meat trays were preferred over paperboard trays
- Plastic food and beverage containers were chosen more frequently than glass containers
- For fast food, polystyrene was chosen over paper or cardboard
- Glass single serving size beverage containers were preferred over either juice boxes or cans
- Plastic bags were more popular than paper bags for self-service produce and bulk foods

Shoppers see recycling as the solution to the garbage problem. Very few respondents indicated that source reduction might be the answer. When asked to rank the methods which would be most effective in managing garbage, the top three responses were Mandatory Recycling, Degradable Products, and Voluntary Recycling.

Consumers, manufacturers and the government are all seen as responsible for solving the garbage problem, but consumers placed the majority of the responsibility on themselves. Recycling, recyclability, and recycling regulations were all mentioned as the most effective solutions. Across all of the demographic groups, respondents indicated that they personally could be effective in helping to solve the garbage glut.

Perceived severity of problems facing America

GARBAGE AND SOLID WASTE DISPOSAL IS CONSIDERED A MORE SERIOUS PROBLEM IN AMERICA THAN NUCLEAR SAFETY, FOOD SAFETY OR NATIONAL DEFENSE. CONVERSELY, THE GARBAGE ISSUE WAS SEEN AS LESS SEVERE A PROBLEM THAN DRUGS, CRIME, THE COST OF HEALTH CARE, HOMELESSNESS AND POVERTY, THE FEDERAL DEFICIT AND AIR AND WATER POLLUTION.

The food shoppers who participated in this survey were asked to rate various problems facing America on the basis of their severity. Using a scale from 1 to 10, where a 1 meant very minor and a 10 meant extremely severe, the issue of Garbage and Solid Waste Disposal was rated an average of 7.46.

In the opinions of these shoppers, the Garbage problem was as large a problem as Education in America, and was seen as more severe than problems with Nuclear Safety, Food Safety and National Defense.

Those shoppers who also indicated that they actively recycle rated the Garbage issue as slightly more severe than the average shopper did. This same group of recyclers gave a lower severity rating than average to the problem of Drugs in America.

There were some slight differences among demographic groups. Generally speaking, the demographic segments who found the Garbage problem to be more severe than their counterparts were more likely to be:

- In larger households
- Older
- Home owners in single family residences
- Not employed
- High school educated, or less
- Women
- In the Southern region

TABLE 1

SEVERITY OF PROBLEMS FACING AMERICA

Q. 1: Tell me how serious each of these problems are?
(1 = Very Minor, 10 = Extremely Severe)

(TableReads Across)	(Base)	Drugs	Crime	Cost of Health Care	Homelessness & Poverty	Federal Deficit	Air & Water Pollution	Garbage & Solid Waste Disposal	Education	Nuclear Safety	Food Pesticides & Residues	National Defense
Total	(750)	8.99	8.47	8.17	7.88	7.86	7.66	7.46	7.42	6.58	6.54	5.79
Recyclers	(483)	8.92	8.32	8.19	7.90	7.82	7.79	7.60	7.42	6.56	6.55	5.72
Household size												
One	(124)	9.06	8.50	8.11	8.04	8.10	7.56	7.31	7.71	6.67	6.69	5.79
Two	(255)	8.89	8.42	8.26	7.69	7.74	7.60	7.41	7.29	6.19	6.44	5.67
Three or more	(362)	9.08	8.52	8.17	8.00	7.89	7.76	7.58	7.44	6.84	6.57	5.89
Age												
Less than 35	(277)	8.78	8.29	7.87	7.94	7.64	7.79	7.18	7.46	6.61	6.03	5.85
35 – 49	(223)	8.96	8.36	8.04	7.96	7.59	7.58	7.33	7.52	6.79	6.87	5.67
50 and over	(218)	9.25	8.81	8.62	7.78	8.46	7.63	7.90	7.25	6.32	6.82	5.84
Income												
Less than $20,000	(187)	8.93	8.71	8.18	7.93	7.73	7.62	7.40	7.15	6.87	6.71	5.89
$20,000 – $34,999	(234)	9.02	8.56	8.42	8.17	7.96	7.79	7.45	7.42	6.65	6.38	5.84
$35,000 or more	(240)	8.97	8.10	7.87	7.49	7.70	7.49	7.31	7.53	6.16	6.34	5.59
Housing												
Single family	(516)	9.04	8.49	8.27	7.81	7.97	7.71	7.59	7.43	6.59	6.66	5.83
Multiple family	(212)	8.91	8.49	7.98	8.08	7.64	7.64	7.20	7.48	6.61	6.24	5.64
Own	(536)	9.05	8.54	8.25	7.83	7.94	7.70	7.54	7.43	6.55	6.63	5.81
Rent	(199)	8.88	8.30	7.98	8.01	7.63	7.65	7.28	7.43	6.65	6.26	5.72
Employed												
Full time/Part time	(463)	8.87	8.30	8.05	7.87	7.67	7.66	7.28	7.48	6.58	6.35	5.71
Not employed	(270)	9.23	8.81	8.38	7.90	8.23	7.75	7.81	7.34	6.62	6.85	5.98
Education												
High school or less	(341)	9.11	8.75	8.43	7.99	7.82	7.81	7.58	7.23	6.76	6.66	5.79
College or more	(394)	8.91	8.25	7.95	7.80	7.91	7.59	7.38	7.60	6.43	6.44	5.78
Garbage Fees												
Billed	(321)	8.89	8.36	8.22	7.60	7.83	7.38	7.40	7.30	6.30	6.43	5.67
Taxed	(278)	8.99	8.37	8.03	8.07	7.91	8.05	7.47	7.47	6.77	6.51	5.90
Not Paid	(103)	9.25	8.95	8.42	8.22	7.78	7.53	7.53	7.61	6.68	6.92	5.69
Sex												
Male	(175)	8.53	7.80	7.66	6.89	7.54	7.26	6.69	7.28	5.53	5.75	5.23
Female	(575)	9.13	8.68	8.32	8.18	7.97	7.79	7.70	7.47	6.91	6.77	5.97
Region												
Northeast	(161)	8.77	8.20	7.91	7.89	7.98	7.79	7.58	7.41	6.51	6.57	5.89
North Central	(238)	9.01	8.34	8.02	7.66	7.65	7.49	7.36	7.33	6.57	6.58	5.54
South	(245)	9.19	8.85	8.47	8.13	7.92	7.68	7.63	7.51	6.70	6.57	5.93
West	(106)	8.81	8.31	8.20	7.75	8.02	7.83	7.13	7.45	6.43	6.29	5.90

Methods of solid waste disposal

WHILE OVER HALF OF ALL SHOPPERS CLAIM TO BE RECYCLING ALUMINUM CANS, THERE ARE STILL LARGE AMOUNTS OF RECYCLABLE MATERIALS ENTERING THE SOLID WASTE STREAM. THE RECYCLING OF ALUMINUM CANS FAR OUTWEIGHS THE RECYCLING OF OTHER MATERIALS.

Aluminum Cans—59% of the shoppers are recycling cans, either by taking them to a recycling center, separating them for curbside pick up, or by giving them to organizations or individuals who recycle. Among the Recyclers, defined as those people who recycle either aluminum cans, newspapers and/or plastic, 88% are recycling cans. Recycling cans is more prevalent in the Northeast and the West.

Newspaper—Over one-third of the shoppers (36%) are recycling newspapers, compared to 55% of the Recyclers. Nearly half of all shoppers put the newspapers out with the trash, as opposed to recycling or reusing them for another purpose, such as burning. Less than one-quarter of Southerners recycle newspapers.

Cardboard—Far fewer people recycle cardboard than newspapers, with 10% of the shoppers recycling it and 69% putting it out with the trash. Northeasterners and Westerners are more likely to recycle cardboard than others are.

Plastic—Recycling plastic is a relatively unfamiliar phenomenon, with 13% of the shoppers recycling plastic food containers. Only 5% said they recycle plastic non-food containers. A full three-quarters of the shoppers said they put plastic food containers out with the trash and 88% send out plastic non-food containers as well. Southerners are least likely to recycle plastics.

THIS SUBJECT IS CONTINUED ON THE NEXT PAGE

TABLE 2

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of _____?

(TableReads Across)	(Base)	Food Scraps		Aluminum Cans		Newspaper		Cardboard		Plastic Food Bottles/ Containers		Plastic Non-Food Bottles/ Containers	
		Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle
Total	(750)	46%	—	37%	59	47%	36	69%	10	75%	13	88%	5
Recyclers	(483)	44%	—	11%	88	30%	55	62%	14	68%	20	83%	8
Household size													
One	(124)	56%	—	36%	55	52%	34	75%	9	83%	7	85%	3
Two	(255)	48%	—	38%	60	47%	35	66%	9	76%	13	88%	5
Three or more	(362)	41%	—	36%	60	44%	39	70%	11	71%	14	88%	6
Age													
Less than 35	(277)	50%	—	37%	58	48%	35	75%	11	77%	13	89%	6
35 – 49	(223)	39%	—	37%	61	48%	33	71%	9	75%	14	89%	5
50 and over	(218)	48%	—	38%	56	44%	39	62%	10	73%	10	84%	5
Income													
Less than $20,000	(187)	54%	—	36%	59	50%	32	67%	9	78%	10	86%	3
$20,000 – $34,999	(234)	44%	—	35%	60	44%	33	68%	10	77%	10	89%	6
$35,000 or more	(240)	40%	—	39%	58	45%	43	73%	11	72%	18	90%	6
Housing													
Single family	(516)	42%	—	36%	59	44%	39	67%	11	74%	13	88%	5
Multiple family	(212)	53%	—	41%	57	51%	30	75%	7	76%	13	87%	5
Own	(536)	41%	—	34%	61	42%	39	65%	11	71%	14	85%	7
Rent	(199)	56%	—	43%	55	56%	31	79%	8	83%	9	93%	2
Employed													
Full time/Part time	(463)	44%	—	37%	59	48%	35	71%	10	76%	13	89%	5
Not employed	(270)	48%	—	36%	58	44%	39	66%	11	73%	12	86%	5
Education													
High school or less	(341)	46%	—	37%	58	46%	32	66%	11	76%	12	87%	5
College or more	(394)	45%	—	36%	60	46%	40	72%	9	73%	13	88%	6
Garbage Fees													
Billed	(321)	42%	—	32%	64	42%	39	67%	12	73%	16	88%	6
Taxed	(278)	54%	—	40%	54	50%	37	74%	10	77%	12	89%	6
Not Paid	(103)	36%	—	44%	58	52%	30	72%	6	75%	7	85%	3
Sex													
Male	(175)	50%	—	35%	60	49%	42	73%	13	80%	14	87%	6
Female	(575)	44%	—	38%	58	46%	35	68%	9	73%	12	88%	5
Region													
Northeast	(161)	60%	—	37%	60	40%	44	67%	15	69%	20	87%	8
North Central	(238)	48%	—	38%	55	45%	36	67%	9	72%	14	88%	6
South	(245)	39%	—	44%	53	57%	22	75%	4	82%	4	87%	3
West	(106)	35%	—	19%	79	35%	57	65%	16	71%	17	89%	5

Methods of solid waste disposal

Plastic bags and Styrofoam®—Over 75% of the shoppers are putting plastic bags and Styrofoam® out with the trash. Awareness of the recyclability of these products is limited, and is outlined further in the next section of this report, Reasons For Not Recycling.

Glass Bottles and Jars—A low 20% of all shoppers and 31% of the Recyclers are recyling glass; 70% of the shoppers are putting those products out with the trash. Southerners are least likely to recycle glass.

Paper Bags—The majority of shoppers (57%) put these out with the rest of their garbage, and only 11% recycle them. Even among the Recyclers, only 17% claim to be recycling paper bags.

Magazines—are recycled in some way by 28% of all shoppers and 39% of the Recyclers. Half of the shoppers pitch magazines out with the trash, as do 41% of the Recyclers.

Yard Waste—This large component of the solid waste stream is included in the general trash in 37% of the households interviewed, and is composted by an additional 31%. Among Recyclers, 33% put yard waste out with the trash and 37% compost it.

TABLE 3

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of _____?

(TableReads Across)	(Base)	Yard Waste		Plastic Bags		Styrofoam		Glass Jars/ Bottles		Paper Bags		Magazines	
		Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle	Out With Trash	Recycle
Total	(750)	37%	—	76%	4	78%	2	70%	20	57%	11	51%	28
Recyclers	(483)	33%	—	70%	6	74%	4	58%	31	49%	17	41%	39
Household size													
One	(124)	36%	—	74%	2	77%	2	69%	16	62%	6	54%	27
Two	(255)	36%	—	73%	4	77%	2	68%	22	55%	11	55%	29
Three or more	(362)	38%	—	78%	5	79%	3	71%	21	56%	13	47%	28
Age													
Less than 35	(277)	38%	—	79%	6	81%	4	69%	20	61%	10	55%	25
35 – 49	(223)	33%	—	78%	3	81%	2	74%	18	60%	12	51%	26
50 and over	(218)	38%	—	68%	3	72%	1	67%	22	51%	11	48%	32
Income													
Less than $20,000	(187)	37%	—	70%	2	76%	1	72%	18	48%	12	51%	24
$20,000 – $34,999	(234)	37%	—	75%	5	78%	3	71%	18	60%	10	51%	27
$35,000 or more	(240)	34%	—	82%	4	81%	3	70%	23	61%	12	55%	29
Housing													
Single family	(516)	37%	—	75%	4	77%	3	70%	21	55%	12	50%	30
Multiple family	(212)	35%	—	77%	4	80%	1	71%	18	63%	9	53%	24
Own	(536)	34%	—	74%	5	75%	3	69%	22	54%	13	49%	29
Rent	(199)	43%	—	78%	2	84%	2	72%	16	64%	8	55%	25
Employed													
Full time/Part time	(463)	37%	—	77%	4	80%	2	70%	19	59%	10	53%	27
Not employed	(270)	36%	—	73%	4	75%	3	69%	23	53%	14	48%	30
Education													
High school or less	(341)	35%	—	75%	3	76%	2	72%	18	57%	11	52%	25
College or more	(394)	38%	—	75%	5	79%	3	68%	22	56%	12	50%	31
Garbage Fees													
Billed	(321)	35%	—	75%	5	79%	2	70%	21	55%	14	49%	31
Taxed	(278)	46%	—	76%	4	82%	4	68%	22	63%	9	52%	29
Not Paid	(103)	24%	—	74%	2	70%	2	70%	13	52%	10	57%	19
Sex													
Male	(175)	35%	—	81%	4	83%	2	71%	21	66%	11	54%	30
Female	(575)	37%	—	74%	4	76%	2	69%	20	54%	20	50%	28
Region													
Northeast	(161)	33%	—	74%	5	77%	4	56%	34	56%	11	50%	36
North Central	(238)	37%	—	81%	3	76%	3	69%	21	54%	13	52%	26
South	(245)	36%	—	74%	4	79%	2	82%	6	64%	8	53%	21
West	(106)	44%	—	69%	3	80%	2	63%	30	48%	15	45%	40

Reasons for not recycling

SHOPPERS' RECYCLING ACTIVITIES ARE THWARTED BY TWO MAIN OBSTACLES: THE SHOPPERS DON'T KNOW WHERE TO RECYCLE, AND THEY DON'T KNOW WHAT IS RECYCLABLE.

Aluminum cans—Over half of the shoppers interviewed said they are currently recycling cans. Among the non-Recyclers, one of the major reasons for not recycling was having few cans. Apparently, recycling small quantities is not seen as worthwhile.

Among the non-Recyclers, nearly one in five said that it's too time consuming and too much trouble to recycle. An additional one in five said there is nowhere to take the cans to be recycled. Only 3% of those surveyed said they didn't know that cans could be recycled.

Newspapers—Just over one-third of the shoppers interviewed said they recycle newspapers. Among those who don't recycle newspapers, nearly one-quarter said there is nowhere to take the papers for recycling; 13% said they don't have enough papers to recycle, and 14% said recycling newspapers takes too much time and trouble.

Plastics—With only 16% of respondents recycling plastics, this is the least recycled of the three major materials. To a large degree, the lack of recycling may be due to a lack of recycling information and recycling facilities. Nearly one-third of the non-Recyclers said there is nowhere to take plastics for recycling, and 28% didn't know plastics could be recycled.

TABLE 4

REASONS FOR NOT RECYCLING

Q. 3: You didn't mention recycling _____. Why is that?

(Table Reads Down)	Aluminum Cans	Newspapers	Plastics
Percent who do recycle	59%	36	16
Base = Non recyclers	(311)	(480)	(629)
Have few to recycle	23%	13	6
Too much time/trouble	19%	14	12
Nowhere to take them	18%	24	32
Didn't know could be recycled	3%	8	28
Save/re-use	1%	6	3
Don't buy	2%	5	—

Recycling regulations

AWARENESS OF MANDATORY RECYCLING REGULATIONS IS MINIMAL. AWARENESS OF VOLUNTARY RECYCLING PROGRAMS IS NOT CONSISTENT ACROSS THE DEMOGRAPHIC GROUPS.

Across the major recyclable materials, no more than 7% of shoppers reported that recycling is mandatory in their community. Since the awareness of mandatory recycling is not much greater among the Recyclers, it would appear that mandatory recycling is not a significant factor in converting a household to recycling. Mandatory recycling is more prevalent in the Northeast than in any other region.

Separating trash for curbside recycling was said to be mandatory for only 8% of the shoppers interviewed, and an additional 38% said that curbside recycling is available to them on a voluntary basis. Combining these figures implies that curbside recycling is available to less than half of those interviewed.

Those who were more likely to have access to curbside recycling, measured as those who said it was available, were:

- Under 35 years old (52%)
- Renters (51%)
- Not paying garbage collection (52%)
- Living in the Northeast (51%) or the West (53%)

Plastics recycling was mandatory for 3% of the shoppers, and available to a total of 30%. Renters were more likely to be aware of plastic recycling than homeowners were (37% vs 27%).

Recycling cans and bottles was mandatory for 7% of those interviewed, and available to a total of 74%. Those most aware of the availability of recycling cans and bottles were:

- In households of three or more people (81%)
- Under 35 years old (81%)
- Living in the West (87%)

For 7% of those in the survey, recycling newspapers was mandatory, and was available to a total of 63%. Those households which were more likely to be aware of available recycling for newspapers were:

- In households of three or more people (69%)
- With household income of $35,000 or more annually (68%)
- Living in the West (79%)

TABLE 5

RECYCLING REGULATIONS

Q. 6: In your community, is _____ mandatory, voluntary or not available to you?

(TableReads Across)	(Base)	Separating Trash			Recycling Plastic			Recycling Cans and Bottles			Newspapers		
		Mand.	Vol.	N/A	Mand.	Vol.	N/A	Mand.	Vol.	N/A	Mand.	Vol.	N/A
Total	(750)	8%	38	49	3%	27	62	7%	67	21	7%	56	31
Recyclers	(483)	10%	43	44	3%	30	59	10%	75	12	9%	64	22
Household size													
One	(124)	5%	39	52	2%	23	65	3%	69	22	3%	54	36
Two	(255)	6%	35	51	2%	25	65	6%	62	28	5%	53	35
Three or more	(362)	9%	41	46	3%	30	58	10%	71	16	9%	60	26
Age													
Less than 35	(277)	7%	45	42	3%	31	55	8%	73	13	5%	60	25
35 – 49	(223)	9%	36	53	2%	28	63	8%	66	23	8%	57	32
50 and over	(218)	7%	34	54	4%	21	69	6%	62	28	6%	52	37
Income													
Less than $20,000	(187)	4%	40	50	1%	30	63	3%	71	21	2%	55	36
$20,000 – $34,999	(234)	6%	42	48	3%	29	61	7%	71	19	5%	57	32
$35,000 or more	(240)	9%	36	50	3%	25	62	10%	63	22	9%	59	27
Housing													
Single family	(516)	9%	36	51	3%	26	63	9%	66	22	8%	57	30
Multiple family	(212)	4%	45	44	2%	31	57	4%	73	18	2%	56	31
Own	(536)	8%	36	52	2%	25	65	8%	66	22	8%	57	31
Rent	(199)	5%	46	42	3%	34	53	4%	73	17	2%	59	29
Employed													
Full time/Part time	(463)	8%	39	50	2%	28	60	7%	70	19	6%	59	28
Not employed	(270)	7%	37	49	3%	25	65	7%	64	24	7%	52	35
Education													
High school or less	(341)	6%	39	50	2%	27	64	6%	69	20	6%	55	35
College or more	(394)	9%	38	48	3%	28	60	8%	66	21	7%	58	27
Garbage Fees													
Billed	(321)	8%	36	53	4%	27	63	5%	71	21	6%	60	30
Taxed	(278)	8%	38	48	2%	29	59	10%	63	22	9%	53	32
Not Paid	(103)	4%	48	42	—	29	61	5%	73	17	2%	58	31
Sex													
Male	(175)	6%	42	49	3%	28	60	4%	70	22	5%	55	34
Female	(575)	8%	37	49	2%	27	62	8%	66	21	7%	57	30
Region													
Northeast	(161)	21%	30	45	7%	22	65	22%	51	22	20%	42	34
North Central	(238)	4%	42	50	1%	30	58	6%	71	20	3%	63	30
South	(245)	4%	36	54	1%	19	72	1%	66	27	3%	51	38
West	(106)	5%	48	43	3%	44	43	2%	85	9	2%	77	13

Preferred recycling method

BY FAR, RESPONDENTS WOULD PREFER CURBSIDE RECYCLING OVER A CENTRALLY LOCATED RECYCLING CENTER.

Overwhelmingly, shoppers want recycling to be as convenient as possible. Two-thirds of the respondents preferred curbside recycling over the option of taking the materials to a local facility.

As income levels of the households rose, so did the preference for curbside recycling. Conversely, those with larger households showed a slight increase in interest in a convenient center for recycling.

Curbside recycling was more favored by these demographic groups:

- Single person households (69%)
- Households with incomes over $35,000 (74%)
- Those who are college educated (71%)
- Those who are billed directly for garbage pickup (70%)
- Those living in the Northeast (71%)
- Those living in the West (72%)

TABLE 6

PREFERRED RECYCLING METHOD

Q. 7: If a new recycling program were introduced in your community, how would you prefer to see it operate?

(Table Reads Across)	(Base)	Separate Recyclables for Curbside Pick Up	Return Recyclables to a Convenient Recycling Center
Total	(750)	66%	26
Recyclers	(483)	66%	26
Household size			
One	(124)	69%	19
Two	(255)	67%	25
Three or more	(362)	64%	28
Age			
Less than 35	(277)	67%	28
35 – 49	(223)	67%	26
50 and over	(218)	64%	24
Income			
Less than $20,000	(187)	56%	34
$20,000 – $34,999	(234)	68%	24
$35,000 or more	(240)	74%	19
Housing			
Single family	(516)	67%	24
Multiple family	(212)	66%	28
Own	(536)	68%	24
Rent	(199)	62%	29
Employed			
Full time/part time	(463)	69%	24
Not employed	(270)	63%	29
Education			
High school or less	(341)	61%	30
College or more	(394)	71%	21
Garbage fees			
Billed	(321)	70%	21
Taxed	(278)	66%	28
Not paid	(103)	60%	30
Sex			
Male	(175)	66%	27
Female	(575)	66%	25
Region			
Northeast	(161)	71%	19
North Central	(238)	65%	26
South	(245)	62%	31
West	(106)	72%	21

Recycling information sources

CONSUMER AND ENVIRONMENTAL GROUPS ARE SEEN AS THE MOST RELIABLE SOURCES FOR RECYCLING INFORMATION.

Forty percent (40%) of shoppers chose Consumer and Environmental groups as the preferred source for information on recycling. The media were next in popularity with 19% of all shoppers, followed by grocery retailers and product manufacturers, each 11%, and government agencies at 10%.

Respondents in single-person households were less likely to choose consumer groups, and more likely to select government agencies for their information regarding recycling. Men in general and older respondents were also less likely to choose consumer groups as an information source.

The media were slightly more popular with the middle income group with a household income of $20,000 to $35,000 annually.

Those with an annual income under $20,000 were more likely than the other income groups to select grocers as an information source.

Nearly half of the Northeasterners (48%) chose Consumer or Environmental groups as a source of information, higher than the average. Those living in the West chose the media more frequently than other groups did. More than other groups, Southerners look toward product manufacturers for information.

TABLE 7

RECYCLING INFORMATION SOURCES

Q. 8: Which of the following do you believe would be the best source of (recycling) information?

(Table Reads Across)	(Base)	Consumer or Environmental Groups	Media	Grocers/ Retailers	Product Manufacturers	Government Agencies
Total	(750)	40%	19	11	11	10
Recyclers	(483)	40%	22	11	11	9
Household size						
One	(124)	30%	17	13	12	15
Two	(255)	42%	20	11	11	7
Three or more	(362)	41%	20	11	11	11
Age						
Less than 35	(277)	41%	20	12	13	9
35 – 49	(223)	44%	19	11	8	12
50 and over	(218)	33%	18	11	12	12
Income						
Less than $20,000	(187)	37%	14	16	14	8
$20,000 – $34,999	(234)	40%	24	8	10	9
$35,000 or more	(240)	40%	19	13	10	14
Housing						
Single family	(516)	41%	18	11	11	9
Multiple family	(212)	36%	23	14	11	13
Own	(536)	40%	20	11	10	9
Rent	(199)	40%	17	13	15	14
Employed						
Full time/part time	(463)	41%	21	12	10	10
Not employed	(270)	37%	17	10	12	10
Education						
High school or less	(341)	36%	18	14	11	9
College or more	(394)	43%	21	9	11	11
Garbage fees						
Billed	(321)	41%	21	9	10	8
Taxed	(278)	37%	18	14	12	12
Not paid	(103)	47%	17	12	9	12
Sex						
Male	(175)	35%	22	10	13	15
Female	(575)	41%	19	12	10	9
Region						
Northeast	(161)	48%	15	11	7	11
North Central	(238)	40%	21	11	10	11
South	(245)	35%	18	11	14	11
West	(106)	34%	24	14	11	9

Recycling information location

IF RESPONDENTS ARE TO GET RECYCLING INFORMATION THROUGH GROCERS, THE INFORMATION SHOULD BE ON INDIVIDUAL PACKAGES.

Half of the shoppers surveyed said that recycling information would be most useful if it were on individual packages. This was preferred by almost 2 to 1 over consumer brochures, and by 4 to 1 over shelf labels.

Northeasterners were more likely than others to look for information on individual products. Those preferring consumer brochures were more likely to be Westerners.

TABLE 8

RECYCLING INFORMATION LOCATION

Q. 9: What would be most helpful (from grocery retailers)?

(Table Reads Across)	(Base)	Labels on Individual Products	Consumer Brochures	Labels on The Shelf
Total	(750)	50%	26	12
Recyclers	(483)	49%	29	10
Household size				
One	(124)	47%	23	14
Two	(255)	50%	26	12
Three or more	(362)	52%	27	12
Age				
Less than 35	(277)	52%	26	13
35 – 49	(223)	52%	26	10
50 and over	(218)	47%	25	13
Income				
Less than $20,000	(187)	48%	28	14
$20,000 – $34,999	(234)	54%	25	9
$35,000 or more	(240)	52%	25	12
Housing				
Single family	(516)	50%	26	12
Multiple family	(212)	51%	26	11
Own	(536)	50%	26	12
Rent	(199)	52%	26	12
Employed				
Full time/part time	(463)	50%	27	12
Not employed	(270)	51%	24	12
Education				
High school or less	(341)	53%	25	11
College or more	(394)	48%	27	13
Garbage fees				
Billed	(321)	51%	26	12
Taxed	(278)	50%	25	12
Not paid	(103)	51%	32	8
Sex				
Male	(175)	48%	24	13
Female	(575)	51%	26	12
Region				
Northeast	(161)	55%	22	11
North Central	(238)	50%	28	11
South	(245)	47%	25	14
West	(106)	52%	30	11

Recycled containers

WHILE HALF OF THE SHOPPERS SAID THEY WOULD LIKE TO SEE RECYCLING INFORMATION ON INDIVIDUAL PRODUCT LABELS, ONE-THIRD OF THE SHOPPERS SAID THEY WOULD NOT BE INFLUENCED BY A PRODUCT'S LABEL. OF THOSE WHO WOULD BE INFLUENCED BY A LABEL INDICATING THAT A PRODUCT WAS PACKAGED IN RECYCLED MATERIALS, NEARLY 70% SAID THEY WOULD BE MORE LIKELY TO PURCHASE A RECYCLED PACKAGE THAN A NON-RECYCLED PACKAGE.

Just over half (51%) of the shoppers interviewed said they would be more likely to buy a non-food product like shampoo if it were packaged in a recycled container, representing 84% of those who said that a product's label would influence their purchase of the product. Eighty-four percent of the Recyclers who are influenced by labels also said they would be more inclined to buy a product in a recycled container, with 35% saying they would not be influenced at all by the label.

The figures are slightly less positive for food products in a recycled container. Among those who could be influenced in their purchase decision by product labeling, 68% of all shoppers and 70% of the Recyclers indicated they would be more likely to purchase a product packaged with recycled materials.

The following demographic groups were the least likely to be influenced by a food package label which indicated that the product was packaged with recycled materials:

- Households with 3 or more members (39%)
- Those under 35 years old (43%)
- Households with income over $35,000 annually (40%)
- Renters (41%)
- Those who do not pay for garbage pick up (42%)
- Men (50%)
- Southerners (41%)

These groups were more likely to purchase a food product in a recycled package than other groups were:

- Recyclers (47%)
- Single person households (43%)
- Those between 35 and 49 years old (46%)
- Households with annual income over $20,000 (45%)
- Those employed either full or part time (44%)
- Those educated beyond high school (50%)
- Those paying for garbage collection (44%)
- Women (44%)
- Westerners (54%)

TABLE 9

RECYCLED CONTAINERS

Qs. 10-11: If the label on a (food/non-food) product said that the package was made from recycled materials, would you be much more likely to try it, a little more likely, a little less likely, much less likely, or not influenced by the label at all?

Table shows those saying "much more likely" or "a little more likely".

(Table Reads Across)	(Base)	Food	Non-food
Total	(750)	43%	51
Recyclers	(483)	47%	56
Household size			
One	(124)	44%	59
Two	(255)	42%	52
Three or more	(362)	42%	49
Age			
Less than 35	(277)	42%	49
35 – 49	(223)	46%	55
50 and over	(218)	38%	52
Income			
Less than $20,000	(187)	38%	46
$20,000 – $34,999	(234)	44%	56
$35,000 or more	(240)	46%	51
Housing			
Single family	(516)	43%	52
Multiple family	(212)	44%	53
Own	(536)	43%	53
Rent	(199)	41%	50
Employed			
Full time/part time	(463)	44%	52
Not employed	(270)	40%	51
Education			
High school or less	(341)	34%	46
College or more	(394)	50%	58
Garbage fees			
Billed	(321)	44%	52
Taxed	(278)	48%	52
Not paid	(103)	39%	51
Sex			
Male	(175)	39%	43
Female	(575)	44%	54
Region			
Northeast	(161)	43%	56
North Central	(238)	45%	52
South	(245)	35%	46
West	(106)	54%	50

Awareness of recycled packaging

MOST SHOPPERS ARE NOT AWARE OF PRODUCTS IN RECYCLED PACKAGING IN THE SUPERMARKET.

Twenty-four percent (24%) of all shoppers, and 27% of the Recyclers, said they were aware of products in the supermarket which are packaged with recycled materials. Awareness of these products is higher among these demographic groups:

- Under 35 years old (30%)
- Income over $20,000 (27%)
- Employed outside the home (29%)
- College educated (30%)
- Pay for garbage collection (26%)
- Men (29%)

Interestingly, awareness of recycled packaging in the supermarket decreases as age of the respondents increases. Awareness was lowest among Southerners (21%).

The one item mentioned most often as being packaged with recycled materials was cereal boxes (11% of those aware of recycled packages), followed by aluminum cans (9%), beverage bottles (6%) and greeting cards (6%).

In total, 60% of those aware of recycled packaging mentioned a particular product, such as cereal or greeting cards, and 14% mentioned a type of packaging, such as cardboard or cans.

TABLE 10

RECYCLED PACKAGING

Q. 12: Have you noticed any items in the supermarket which say they are packaged with recycled materials?

(Table Reads Across)	(Base)	Aware	Not Aware
Total	(750)	24%	76
Recyclers	(483)	27%	73
Household size			
One	(124)	23%	77
Two	(255)	26%	74
Three or more	(362)	24%	76
Age			
Less than 35	(277)	30%	70
35 – 49	(223)	26%	74
50 and over	(218)	17%	84
Income			
Less than $20,000	(187)	22%	78
$20,000 – $34,999	(234)	28%	72
$35,000 or more	(240)	27%	73
Housing			
Single family	(516)	24%	76
Multiple family	(212)	26%	74
Own	(536)	25%	75
Rent	(199)	25%	75
Employed			
Full time/part time	(463)	29%	72
Not employed	(270)	18%	82
Education			
High school or less	(341)	19%	81
College or more	(394)	30%	70
Garbage fees			
Billed	(321)	25%	75
Taxed	(278)	27%	73
Not paid	(103)	19%	81
Sex			
Male	(175)	29%	71
Female	(575)	23%	77
Region			
Northeast	(161)	26%	74
North Central	(238)	26%	74
South	(245)	21%	79
West	(106)	26%	74

Environmentally friendly supermarket

OVER HALF THE SHOPPERS INDICATED A POSITIVE RESPONSE TO AN ENVIRONMENTALLY-ORIENTED SUPERMARKET.

Fifty-nine percent (59%) of all of the shoppers interviewed said that they would be likely to change to a new supermarket in their area if the new supermarket offered environmentally friendly products and practices.

Among all shoppers, 12% said they would 'Definitely' change to a store which promoted environmentally safe products and practices, with an additional 47% saying they 'Probably' would switch.

Shoppers in larger households, younger respondents, and women were among those more likely to indicate a positive intent to change stores. Upper income shoppers were among the least likely.

Westerners and Northeasterners would be more likely to change stores than those living in the other two regions.

TABLE 11

RECYCLING INFORMATION SOURCES

Q. 13: How likely would you be to change stores where you do most of your food shopping if a new store opened near you which encouraged environmentally safe products and practices?

(Table Reads Across)	(Base)	Definitely (4)	Probably (3)	Probably Not (2)	Definitely Not (1)	Mean
Total	(750)	12%	47	27	6	2.71
Recyclers	(483)	14%	48	25	5	2.77
Household size						
One	(124)	17%	36	22	11	2.70
Two	(255)	12%	46	31	5	2.69
Three or more	(362)	10%	51	25	5	2.73
Age						
Less than 35	(277)	11%	53	24	4	2.76
35 – 49	(223)	13%	45	27	5	2.74
50 and over	(218)	13%	40	30	9	2.63
Income						
Less than $20,000	(187)	12%	46	26	5	2.73
$20,000 – $34,999	(234)	14%	48	28	3	2.79
$35,000 or more	(240)	9%	46	29	8	2.62
Housing						
Single family	(516)	11%	45	29	5	2.69
Multiple family	(212)	14%	52	22	8	2.76
Own	(536)	11%	47	28	5	2.71
Rent	(199)	14%	47	25	8	2.71
Employed						
Full time/part time	(463)	11%	48	29	5	2.71
Not employed	(270)	13%	46	24	7	2.71
Education						
High school or less	(341)	11%	46	28	5	2.70
College or more	(394)	12%	48	26	6	2.72
Garbage fees						
Billed	(321)	11%	48	28	5	2.71
Taxed	(278)	12%	49	23	6	2.75
Not paid	(103)	15%	41	30	5	2.72
Sex						
Male	(175)	9%	41	32	7	2.59
Female	(575)	13%	48	25	5	2.75
Region						
Northeast	(161)	16%	42	26	7	2.74
North Central	(238)	8%	49	30	5	2.66
South	(245)	11%	46	27	6	2.69
West	(106)	16%	50	21	5	2.85

Paper vs. plastic grocery bags

OVER THREE-QUARTERS OF ALL CONSUMERS SHOP IN STORES WHICH USE BOTH PAPER AND PLASTIC BAGS.

When asked about the bags their supermarket uses, 78% said the supermarket uses both paper and plastic. Fourteen percent (14%) of all shoppers have only paper bags available to them, and 7% have only plastic available.

TABLE 12

PAPER BAGS VS. PLASTIC BAGS—AVAILABILITY

Q. 14: When your supermarket bags your groceries at the checkout, do they use paper, plastic or both?

(Table Reads Across)	(Base)	Paper Bags	Plastic Bags	Both
Total	(750)	14%	7	78
Recyclers	(483)	15%	6	79
Household size				
One	(124)	15%	7	77
Two	(255)	15%	6	78
Three or more	(362)	13%	9	78
Age				
Less than 35	(277)	17%	9	73
35 – 49	(223)	13%	7	80
50 and over	(218)	12%	6	81
Income				
Less than $20,000	(187)	18%	4	77
$20,000 – $34,999	(234)	14%	12	74
$35,000 or more	(240)	12%	7	80
Housing				
Single family	(516)	15%	6	78
Multiple family	(212)	13%	10	76
Own	(536)	14%	6	79
Rent	(199)	15%	11	74
Employed				
Full time/part time	(463)	12%	8	79
Not employed	(270)	18%	6	75
Education				
High school or less	(341)	15%	6	78
College or more	(394)	14%	8	77
Garbage fees				
Billed	(321)	17%	5	78
Taxed	(278)	14%	9	76
Not paid	(103)	10%	10	81
Sex				
Male	(175)	14%	6	79
Female	(575)	14%	8	77
Region				
Northeast	(161)	11%	7	81
North Central	(238)	16%	6	77
South	(245)	13%	11	75
West	(106)	16%	3	81

Paper vs. plastic grocery bags

THE MAJORITY OF SHOPPERS PREFER PAPER GROCERY BAGS OVER PLASTIC.

By a margin approaching 2 to 1, the shoppers surveyed prefer paper bags over plastic bags (55% vs. 30%). Recyclers were slightly more likely than average to choose paper grocery bags (59% vs. 26%). A low 12% had no preference, and an even lower 3% said their preference depended on the type of groceries they were purchasing.

Paper bags are the bag of choice for shoppers who are:

- In smaller households (57%)
- 35 to 49 years old (59%)
- In upper income groups (58%)
- Homeowners (58%)
- Living in single family dwellings (58%)
- College educated (59%)
- Billed directly for garbage pick up (59%)
- Men (62%)
- Living in the Northeast (65%)

Plastic bags are preferred by those who are:

- In larger households (33%)
- Renters—mainly in apartments (40%)
- Not paying for garbage pick up (36%)
- Women (31%)
- Living in the West (37%) or South (34%)

TABLE 13

PAPER BAGS VS. PLASTIC BAGS—PREFERENCE

Q. 15: Which do you prefer, paper or plastic bags?

(Table Reads Across)	(Base)	Paper	Plastic	No Preference	Depends on Items Purchased
Total	(750)	55%	30	12	3
Recyclers	(483)	59%	26	11	3
Household size					
One	(124)	57%	24	16	3
Two	(255)	56%	29	11	4
Three or more	(362)	54%	33	11	3
Age					
Less than 35	(277)	53%	35	9	2
35 – 49	(223)	59%	28	11	2
50 and over	(218)	51%	27	16	5
Income					
Less than $20,000	(187)	52%	30	12	6
$20,000 – $34,999	(234)	55%	33	10	1
$35,000 or more	(240)	58%	28	12	3
Housing					
Single family	(516)	58%	26	12	3
Multiple family	(212)	47%	42	9	3
Own	(536)	58%	27	12	3
Rent	(199)	47%	40	10	4
Employed					
Full time/part time	(463)	56%	31	11	3
Not employed	(270)	53%	30	13	4
Education					
High school or less	(341)	50%	35	12	3
College or more	(394)	59%	26	11	3
Garbage fees					
Billed	(321)	59%	27	10	3
Taxed	(278)	53%	31	13	3
Not paid	(103)	54%	36	8	2
Sex					
Male	(175)	62%	27	10	1
Female	(575)	53%	31	12	4
Region					
Northeast	(161)	65%	23	9	2
North Central	(238)	53%	29	16	3
South	(245)	53%	34	10	3
West	(106)	49%	37	8	7

Reasons for preferring paper grocery bags

THE REASONS GIVEN MOST OFTEN FOR PREFERRING PAPER GROCERY BAGS WERE MOSTLY ECOLOGICALLY-ORIENTED, INCLUDING RECYCLABILITY AND DEGRADABILITY.

Three reasons for choosing paper grocery bags were mentioned with about the same frequency by shoppers who prefer paper bags. These top reasons were:

- More biodegradable (18%)
- Recyclable (17%)
- Re-use as garbage bags (17%)

The next largest reason was that paper bags are larger than plastic bags, as mentioned by 9% of those preferring paper bags.

Q. 16 Why do you prefer paper bags?

Base = Those preferring paper bags	Total N = 411
Usage (Net)	**39%**
Re-use as garbage bags	17%
Start fires/can burn	7%
Use for storage	6%
Reuseable (non-specific)	6%
Use as garbage can liners	4%
Book covers/other wrapping	3%
Environmental (Net)	**34%**
More biodegradable	18%
Recyclable	17%
Ease/convenience (Net)	**19%**
Easier to carry	7%
Easier to use/handle	6%
Disposable	4%
Easier to store	2%
Shape/size (Net)	**18%**
Larger	9%
Will keep shape/stand up	8%
Fits better in container	1%
Strength (Net)	**16%**
Stronger	6%
Won't tear/break	5%
Sturdy	4%
Holds items better/protected	**4%**
Habit	**3%**
Don't know	**6%**

Reasons for preferring plastic grocery bags

EASE IN CARRYING FORMED THE BASIS FOR PREFERRING PLASTIC GROCERY BAGS.

The two top reasons for choosing plastic grocery bags hinged on the ease with which the bags can be carried. Among the most frequently mentioned reasons for choosing plastic bags were:

- Has handles, therefore easier to carry (23%)
- Easier to carry (non-specific) (22%)

Other frequently mentioned reasons for preferring plastic grocery bags include:

- Re-use as garbage bags (18%)
- Reuseable (non-specific) (10%)
- Won't tear or break (9%)

It is interesting to note that the secondary reasons for preferring plastic bags are the same reasons given secondarily for preferring paper bags—reuseability, especially as garbage bags.

Q. 16 Why do you prefer plastic bags?

Base = Those preferring plastic bags	Total N = 227
Ease/convenience (Net)	**65%**
Has handles/easier to carry	23%
Easier to carry	22%
Disposable	7%
Easier to store	5%
Easier to use	5%
Usage (Net)	**41%**
Re-use as garbage bags	18%
Reuseable (non-specific)	10%
Use as garbage can liner	6%
Use for storage	4%
Strength (Net)	**20%**
Won't tear/break	9%
Stronger	4%
Durable	3%
Sturdy	2%
Environmental (Net)	**7%**
More biodegradable	2%
Recyclable	2%
Shape/size (Net)	**3%**
Don't know	**1%**

Packaging materials preferences

NOTE: THE DATA REGARDING PACKAGING PREFERENCES WERE GATHERED VIA MALL INTERCEPT INTERVIEWING.

There were two areas of questioning which were vital parts of this study, but which couldn't be conducted via a telephone study. This portion of the study was conducted via mall intercept interviews in three cities—Cincinnati, Des Moines, and Fredericksburg, VA. A total of 391 interviews were conducted. A comparison of the telephone survey participants and the mall intercept survey participants is available in the section titled Demographic Profile of Respondents.

Respondents were given general instructions and a self-administered survey. The first portion of the survey consisted of 8 pages regarding various packaging materials. On a single page, alternative packaging materials were listed, along with advantages and disadvantages of each alternative. Respondents were to indicate their personal preference for each of 8 categories. An example of the types of advantages and disadvantages offered appears below.

PAPER GROCERY BAGS

ADVANTAGES:

- Square bottom—stands up by itself
- Easier to recycle
- Can be used for other household purposes

DISADVANTAGES:

- Break or tear when wet
- Bulky—take up space
- More difficult to carry—no handles
- Uses up forestry reserves
- Paper mills are high polluters of water
- May leak

RANKED EFFECTIVENESS IN MANAGING GARBAGE

The second portion of the mall intercept test asked respondents to evaluate 10 alternative methods of dealing with the solid waste problems. Each respondent was asked to rank 10 different methods for their *effectiveness* in managing garbage.

Packaging materials

GROCERY BAGS

As in the telephone portion of the study, respondents were asked to indicate their preference between paper and plastic grocery bags. In this case, however, they were also given a list of ecologic and performance advantages and disadvantages of each type of bag. As in the telephone study, the majority chose paper over plastic.

Those who were most in favor of paper grocery bags included mall respondents with the following characteristics.

- Age 35 – 49 years (66%)
- Annual income over $35,000 (72%)
- Living in single family dwellings (67%)
- Not employed (74%)
- College educated (71%)
- Billed directly for garbage pick up (74%)
- Men (72%)

LAUNDRY DETERGENT

Mall respondents were shown photographs of examples of concentrated liquid and of refill packets to help them form their opinion of laundry detergent packaging. After reviewing the advantages and disadvantages of each, respondents chose the standard packaging concept of large box/bottle overwhelmingly (83% vs. 17%).

Those who were more likely than average to choose the conventional packaging were:

- In households with 2 or more people (83%)
- Age 35 or older (86%)
- In households with annual incomes under $20,000 or over $35,000 (89%, 82%)
- Not employed (87%)
- Those taxed for garbage pick up (85%)
- Women (84%)

TABLE 14

Which do you prefer?

(Table Reads Across)	(Base)	Grocery Bags		Laundry Detergent	
		Paper	Plastic	Powder/ Liquid	Concentrate/ Refills
Total	(391)	64%	36	83%	17
Household size					
One	(40)	63%	38	75%	25
Two	(118)	64%	36	82%	18
Three or more	(233)	64%	35	84%	16
Age					
Less than 35	(183)	63%	37	80%	20
35 – 49	(138)	66%	33	85%	15
50 and over	(67)	63%	37	87%	13
Income					
Less than $20,000	(92)	58%	42	89%	11
$20,000 – $34,999	(115)	60%	40	77%	23
$35,000 or more	(167)	72%	28	82%	18
Housing					
Single family	(255)	67%	33	83%	17
Multiple family	(129)	61%	40	81%	19
Own	(265)	65%	35	83%	17
Rent	(124)	63%	37	83%	17
Employed					
Full time/part time	(283)	61%	39	81%	19
Not employed	(105)	74%	26	87%	13
Education					
High school or less	(167)	55%	46	84%	16
College or more	(224)	71%	28	82%	18
Garbage fees					
Billed	(182)	74%	26	82%	18
Taxed	(48)	48%	50	85%	15
Not paid	(160)	59%	41	83%	18
Sex					
Male	(64)	72%	28	73%	27
Female	(327)	63%	37	84%	16

Packaging materials

FROZEN FOOD PACKAGING

Mall respondents were offered a choice between large plastic bags of frozen foods or single serving size packages. An examination of the differences by demographic groups implies that household size may be the main force behind the choice.

Single serving size packages were chosen by mall respondents with the following characteristics:

- Small households, usually with one person (78%)
- Over 50 years old (54%)

Larger size packages of frozen foods were chosen by these mall respondents:

- In households with three or more people (76%)
- Under 50 years old (65%)
- Living in single family dwellings (69%)
- Not currently employed (70%)

MEAT PACKAGING

Plastic meat trays are preferred over paperboard meat trays by most of the mall respondents surveyed (62% vs. 38%). The demographic groups more likely to choose paperboard meat trays include:

- One person households (50%)
- 35 years and older (42%)
- Household income of at least $35,000 (46%)
- Single family dwellings (40%)
- Home owners (42%)
- College educated (46%)
- Billed for garbage collection (44%)

Plastic meat trays were more attractive to these groups:

- Larger households (65%)
- Under 35 years old (67%)
- Income between $20,000 and $35,000 (70%)
- Renters (71%)
- Those in multiple family dwellings (66%)
- High school educated or less (73%)

TABLE 15

Which do you prefer?

(Table Reads Across)	(Base)	Frozen Foods		Meat Packaging	
		Single Serve	Large Size	Paperboard Trays	Plastic Trays
Total	(391)	38%	62	38%	62
Household size					
One	(40)	78%	23	50%	50
Two	(118)	51%	49	41%	59
Three or more	(233)	24%	76	35%	65
Age					
Less than 35	(183)	33%	67	33%	67
35 – 49	(138)	37%	63	41%	59
50 and over	(67)	51%	49	45%	55
Income					
Less than $20,000	(92)	37%	63	34%	66
$20,000 – $34,999	(115)	39%	61	30%	70
$35,000 or more	(167)	36%	64	45%	55
Housing					
Single family	(255)	31%	69	40%	60
Multiple family	(129)	50%	50	34%	66
Own	(265)	37%	63	42%	58
Rent	(124)	40%	61	29%	71
Employed					
Full time/part time	(283)	41%	59	38%	62
Not employed	(105)	30%	70	38%	62
Education					
High school or less	(167)	38%	62	27%	73
College or more	(224)	37%	63	46%	54
Garbage fees					
Billed	(182)	35%	65	44%	56
Taxed	(48)	48%	52	35%	65
Not paid	(160)	38%	62	33%	68
Sex					
Male	(64)	34%	66	41%	59
Female	(327)	38%	62	38%	62

Packaging materials

FOOD/BEVERAGE CONTAINERS

Plastic food and beverage containers were slightly more popular than glass containers (54% vs. 46%). The groups most in favor of plastic containers were in these demographic groups:

- Larger households (58%)
- Household income under $35,000 (62%)
- Renters (62%)
- Those in multiple family dwellings (59%)
- Not currently employed (60%)
- Taxed for garbage collection (65%)

The groups more likely to prefer glass containers were:

- One and two person households (53%)
- 35 to 49 years old (54%)
- Annual incomes over $35,000 (53%)
- Households billed directly for garbage pick up (55%)

FAST FOOD PACKAGING

Like the food and beverage containers, polystyrene was slightly more popular as a packaging material than cardboard or paper. The polystyrene packages, identified to the mall respondents as Styrofoam (R), were more likely to be preferred by the people in these groups:

- Larger households (57%)
- 35 years and younger (56%)
- Household income under $20,000 (63%)
- Renters (61%)
- High school educated or less (65%)
- Not paying for garbage collection (63%)

Cardboard or paper fast food packaging was preferred by households with these characteristics:

- Single person households (53%)
- Annual income over $35,000 (52%)
- College education or more (53%)

TABLE 16

Which do you prefer?

(Table Reads Across)	(Base)	Food/Beverage Containers		Fast Food Packaging	
		Glass	Plastic	Cardboard/ Paper	Polystyrene
Total	(391)	46%	54	45%	55
Household size					
One	(40)	55%	45	53%	48
Two	(118)	52%	48	47%	53
Three or more	(233)	42%	58	43%	57
Age					
Less than 35	(183)	38%	62	44%	56
35 – 49	(138)	54%	46	45%	55
50 and over	(67)	48%	52	49%	51
Income					
Less than $20,000	(92)	36%	64	37%	63
$20,000 – $34,999	(115)	43%	57	43%	57
$35,000 or more	(167)	53%	47	52%	49
Housing					
Single family	(255)	49%	51	48%	53
Multiple family	(129)	41%	59	43%	57
Own	(265)	49%	51	48%	53
Rent	(124)	38%	62	40%	61
Employed					
Full time/part time	(283)	48%	52	46%	54
Not employed	(105)	40%	60	44%	56
Education					
High school or less	(167)	40%	60	35%	65
College or more	(224)	50%	50	53%	47
Garbage fees					
Billed	(182)	55%	45	53%	47
Taxed	(48)	35%	65	46%	54
Not paid	(160)	39%	61	37%	63
Sex					
Male	(64)	42%	58	45%	55
Female	(327)	47%	53	45%	55

Packaging materials

BEVERAGE CONTAINERS

For single serving size beverages, glass bottles were chosen by 40% of the mall survey participants, compared with 21% choosing juice boxes and 15% choosing cans.

Glass bottles were more popular among these groups:

- One person households (58%)
- Households with annual income over $35,000 (43%)
- Those in multiple family dwellings (47%)
- College educated (46%)

Juice boxes were the package of choice among:

- Larger households (23%)
- Shoppers age 35 to 49 (25%)
- Households with income under $20,000 (25%)

Cans were chosen by the fewest shoppers, but they tended to be:

- Age 50 or older (25%)
- Taxed for garbage collection (25%)

SELF-SERVICE BAGS

Plastic bags were chosen most often over paper bags for self-service produce and bulk foods (64% vs. 36%). The plastic bags enjoyed the most popularity among:

- Shoppers under 35 years old (67%)
- Middle income group (72%)
- Those living in multiple family dwellings (68%)
- High school educated or less (68%)
- Taxed for garbage collection (71%)

TABLE 17

Which do you prefer?

(Table Reads Across)	(Base)	Beverage Containers			Self Service Produce And Bulk Foods	
		Juice Box	Glass Bottles	Cans	Plastic	Paper Bags
Total	(391)	21%	40	15	64%	36
Household size						
One	(40)	15%	58	13	55%	45
Two	(118)	19%	42	18	64%	36
Three or more	(233)	23%	36	14	65%	35
Age						
Less than 35	(183)	19%	39	14	67%	33
35 – 49	(138)	25%	41	12	64%	36
50 and over	(67)	16%	39	25	57%	43
Income						
Less than $20,000	(92)	25%	37	14	67%	33
$20,000 – $34,999	(115)	19%	38	17	72%	28
$35,000 or more	(167)	20%	43	14	58%	42
Housing						
Single family	(255)	22%	37	17	62%	38
Multiple family	(129)	19%	47	12	68%	32
Own	(265)	21%	38	17	65%	35
Rent	(124)	21%	44	11	62%	38
Employed						
Full time/part time	(283)	21%	42	17	64%	34
Not employed	(105)	20%	34	9	57%	43
Education						
High school or less	(167)	22%	32	14	68%	32
College or more	(224)	20%	46	16	60%	40
Garbage fees						
Billed	(182)	22%	41	15	58%	42
Taxed	(48)	15%	33	25	71%	29
Not paid	(160)	21%	41	12	68%	32
Sex						
Male	(64)	20%	42	14	53%	47
Female	(327)	21%	39	15	66%	34

In summary, households with three or more people, shoppers under 35 years old, those living in single family dwellings, and those who are employed chose:

- Paper grocery bags
- Conventional powder/liquid laundry detergent packaging
- Large size frozen food packages
- Plastic meat trays
- Plastic food and beverage containers
- Polystyrene fast food packaging
- Glass single serving beverage containers
- Plastic bulk food bags

Those with an annual income of $35,000 or more were the largest income group. They differ from the list above in that they prefer:

- Glass food and beverage containers, rather than plastic
- Cardboard or paper fast food packaging over polystyrene

College educated respondents differ from the list above in these ways:

- Evenly split between glass and plastic food and beverage containers
- Prefer cardboard or paper fast food packaging

Solutions to the garbage problem

SHOPPERS SEE RECYCLING AS THE ANSWER TO THE GARBAGE PROBLEM.

Two-thirds of the shoppers we spoke to said that the single best solution to the garbage problem is recycling. Source reduction, reducing the amount of garbage we produce, was seen as the solution by only 18% of all shoppers. For the most part, incineration and land fills were not seen as viable solutions.

The Recyclers hold the same opinions as the non-Recyclers—that recycling will solve the garbage glut.

Of course, there were some demographic groups who were more adamant about recycling as the answer, and they were:

- In larger households (69%)
- Under age 35 (75%)
- With household income over $20,000 annually (71%)
- Renters (72%)
- Those in multiple family dwellings (73%)
- Employed (71%)
- College educated (71%)
- Living in the Northeast (68%)

Those who advocated incineration or land fills as the primary solution were asked if they would support an incinerator or land fill in their own community. In both cases, 79% of these small samples said they would support those solutions in their community.

TABLE 18

GARBAGE PROBLEM SOLUTION

Q. 17: What do you feel is the single best solution to the garbage problem?

(Table Reads Across)	(Base)	Recycling	Reducing the Amount We Produce	Burning The Garbage	More Landfills
Total	(750)	66%	18	8	4
Recyclers	(483)	66%	18	8	3
Household size					
One	(124)	59%	13	13	7
Two	(255)	64%	18	12	3
Three or more	(362)	69%	20	5	3
Age					
Less than 35	(277)	75%	16	5	3
35 – 49	(223)	65%	20	8	5
50 and over	(218)	56%	19	14	4
Income					
Less than $20,000	(187)	54%	20	14	6
$20,000 – $34,999	(234)	74%	14	8	2
$35,000 or more	(240)	69%	20	5	3
Housing					
Single family	(516)	63%	20	8	4
Multiple family	(212)	73%	13	9	4
Own	(536)	63%	20	8	3
Rent	(199)	72%	13	10	4
Employed					
Full time/part time	(463)	71%	16	6	3
Not employed	(270)	57%	22	12	4
Education					
High school or less	(341)	60%	19	10	5
College or more	(394)	71%	18	6	2
Garbage fees					
Billed	(321)	64%	18	8	4
Taxed	(278)	68%	18	7	3
Not paid	(103)	68%	17	10	4
Sex					
Male	(175)	63%	17	13	5
Female	(575)	66%	18	7	4
Region					
Northeast	(161)	68%	17	6	3
North Central	(238)	65%	17	8	3
South	(245)	65%	17	10	5
West	(106)	64%	22	9	3

TABLE 19

REASONS FOR NOT RECYCLING

Q. 18A: Would you support an incinerator/a landfill in your community to handle the garbage, or not?

(Table Reads Down)	Incinerator	Landfill
Base = Advocates as best solution to garbage problem	(63)(A)	(29)(A)
Yes	79%	79
No	14%	17
Don't know	6%	3

(A) Very small sample sizes

Effectiveness in managing garbage

The participants in this mall intercept study were asked to rank ten methods of managing garbage in terms of the methods' effectiveness. Even when presented with a varied list of options, the participants still viewed recycling and degradable products as the most effective solutions to the garbage problem.

The mean ratings on the adjacent page show where respondents placed each method on an effectiveness scale. A mean of '10' would indicate that the method is seen as being *most* effective, and a mean of '1' would indicate that the method is seen as *least* effective.

Mandatory Recycling was chosen by 26% of the respondents as the most effective way to manage garbage, followed by Voluntary Recycling, which was chosen first by 16%. Fifteen percent (15%) of the shoppers felt that Paying Consumers to Recycle was the primary solution, and 12% chose Degradable Products.

As far as source reduction is concerned, only 8% of the respondents chose Required Minimal Packaging as the most effective solution. Fines for Consumers Who Don't Recycle was the least popular method, with only 2% of the shoppers choosing it as the most effective solution.

TABLE 20

EFFECTIVENESS IN MANAGING GARBAGE—MEAN RATINGS

(TableReads Across)	(Base)	Mandatory Recycling	Degradable Products	Voluntary Recycling	Education Programs	Paying Consumers To Recycle	Composting	Require Minimal Packaging	Bans Or Taxes On Products	Incinerating Garbage	Fines for Non-Participating Consumers
Total	(391)	6.75	6.58	6.42	6.05	6.00	5.08	4.99	4.77	4.53	3.88
Household size											
One	(40)	7.47	6.78	5.80	6.10	6.13	5.22	3.97	4.80	4.70	4.05
Two	(118)	6.65	6.45	6.22	5.96	5.84	5.31	5.47	4.51	4.50	4.14
Three or more	(233)	6.68	6.62	6.63	6.09	6.06	4.94	4.92	4.89	4.52	3.73
Age											
Less than 35	(183)	6.97	6.68	6.15	6.09	6.56	4.71	4.59	4.90	4.28	4.16
35 – 49	(138)	6.51	6.66	6.76	6.22	5.85	5.29	5.14	4.57	4.59	3.48
50 and over	(67)	6.60	6.28	6.36	5.63	4.88	5.61	5.61	4.84	5.13	4.06
Income											
Less than $20,000	(92)	7.21	6.40	6.46	6.27	5.98	4.83	4.65	4.39	4.66	4.20
$20,000 – $34,999	(115)	6.49	6.20	6.57	5.95	6.44	5.47	4.93	4.42	4.81	3.72
$35,000 or more	(167)	6.71	6.98	6.24	5.96	5.82	4.89	5.31	5.19	4.10	3.93
Housing											
Single family	(255)	6.79	6.54	6.49	5.89	5.85	5.04	5.26	4.80	4.44	3.98
Multiple family	(129)	6.60	6.67	6.24	6.39	6.36	5.09	4.49	4.81	4.67	3.72
Own	(265)	6.88	6.55	6.54	5.94	5.79	5.12	5.05	4.66	4.54	3.98
Rent	(124)	6.47	6.62	6.15	6.31	6.53	5.02	4.84	4.94	4.51	3.70
Employed											
Full time/Part time	(283)	6.80	6.65	6.40	6.13	6.14	5.05	4.85	4.73	4.52	3.80
Not employed	(105)	6.63	6.47	6.44	5.81	5.68	5.18	5.37	4.90	4.45	4.11
Education											
High school or less	(167)	6.42	5.99	7.14	5.86	5.87	5.32	5.04	4.25	5.39	3.78
College or more	(224)	7.01	7.02	5.89	6.20	6.10	4.90	4.94	5.16	3.88	3.96
Garbage Fees											
Billed	(182)	6.96	6.62	6.32	6.03	5.93	5.12	5.09	4.93	3.91	4.17
Taxed	(48)	7.10	6.56	6.81	6.29	6.58	4.92	4.48	4.60	4.13	3.52
Not Paid	(160)	6.39	6.59	6.40	6.03	5.89	5.11	5.03	4.63	5.36	3.65
Sex											
Male	(64)	6.97	6.55	6.55	5.72	6.48	4.69	4.31	5.02	4.55	4.17
Female	(327)	6.71	6.59	6.39	6.12	5.91	5.16	5.12	4.72	4.53	3.83

TABLE 21

EFFECTIVENESS IN MANAGING GARBAGE—PERCENT OF FIRST CHOICES

(TableReads Across)	(Base)	Mandatory Recycling	Voluntary Recycling	Paying Consumers to Recycle	Degradable Products	Education Programs	Require Minimal Packaging	Bans Or Taxes On Products	Incinerating Garbage	Composting	Fines for Non-Participating Consumers
Total	(391)	26%	16	15	12	8	8	6	5	3	2
Household size											
One	(40)	35%	8	15	15	15	5	—	3	3	3
Two	(118)	24%	19	15	10	9	7	6	9	1	2
Three or more	(233)	25%	16	16	13	7	9	7	3	3	1
Age											
Less than 35	(183)	28%	9	20	15	11	4	7	3	1	3
35 – 49	(138)	24%	23	12	12	6	10	7	4	4	1
50 and over	(67)	24%	21	10	8	6	10	5	12	5	—
Income											
Less than $20,000	(92)	35%	10	17	12	9	4	3	5	2	2
$20,000 – $34,999	(115)	22%	17	19	12	7	10	4	4	4	2
$35,000 or more	(167)	26%	16	13	13	9	8	10	2	2	1
Housing											
Single family	(255)	26%	17	13	13	8	8	7	6	2	1
Multiple family	(129)	25%	15	20	10	10	8	5	3	2	2
Own	(265)	26%	19	14	12	6	7	6	6	2	2
Rent	(124)	24%	10	19	12	12	9	7	2	5	2
Employed											
Full time/Part time	(283)	25%	16	17	13	8	7	6	4	2	1
Not employed	(105)	27%	15	11	10	9	9	8	7	4	2
Education											
High school or less	(167)	21%	20	17	8	6	10	7	7	3	1
College or more	(224)	29%	13	14	15	10	6	6	3	2	2
Garbage Fees											
Billed	(182)	26%	15	14	14	8	8	7	6	2	1
Taxed	(48)	31%	19	17	13	8	—	8	2	2	—
Not Paid	(160)	24%	17	16	10	8	9	5	4	3	3
Sex											
Male	(64)	28%	9	19	16	8	2	5	8	3	3
Female	(327)	25%	17	15	12	8	9	6	4	2	1

Solution responsibility

CONSUMERS, MANUFACTURERS AND GOVERNMENT ARE ALL SEEN AS "VERY RESPONSIBLE" FOR SOLVING THE GARBAGE PROBLEM.

At least 60% of the respondents said that shoppers, manufacturers, and federal, state and local government should all be "Very Responsible" when it comes to solving the garbage problem.

The two groups who came away with the least perceived responsibility for finding the solution were educators and grocers.

TABLE 22

SOLUTION RESPONSIBILITY

Q. 19: How responsible should _____ be for solving the garbage problem?
(Percent saying "Very Responsible")

(Table Reads Across)	(Base)	Consumers	Local Government	Manufacturers	State Government	Federal Government	Educators	Grocers
Total	(750)	70%	69	68	65	62	49	40
Recyclers	(483)	73%	69	69	65	62	51	42
Household size								
One	(124)	72%	69	69	65	62	51	45
Two	(255)	71%	68	67	60	58	53	40
Three or more	(362)	69%	70	67	69	65	45	39
Age								
Less than 35	(277)	67%	71	67	67	69	46	35
35 – 49	(223)	70%	67	66	65	58	45	40
50 and over	(218)	75%	70	70	63	60	56	47
Income								
Less than $20,000	(187)	68%	70	71	64	62	48	43
$20,000 – $34,999	(234)	73%	68	68	65	66	45	41
$35,000 or more	(240)	70%	72	67	65	63	53	36
Housing								
Single family	(516)	70%	68	67	63	63	48	39
Multiple family	(212)	70%	72	69	69	63	51	45
Own	(536)	72%	67	68	63	61	49	40
Rent	(199)	65%	75	67	71	66	48	42
Employed								
Full time/part time	(463)	68%	69	67	65	62	47	38
Not employed	(270)	74%	70	69	65	63	52	44
Education								
High school or less	(341)	71%	70	68	65	65	48	41
College or more	(394)	70%	69	68	65	61	50	40
Garbage fees								
Billed	(321)	72%	63	67	58	56	49	39
Taxed	(278)	68%	76	68	71	69	47	41
Not paid	(103)	69%	72	69	70	65	56	42
Sex								
Male	(175)	63%	67	67	62	53	49	37
Female	(575)	72%	69	68	66	65	48	42
Region								
Northeast	(161)	68%	69	68	67	67	47	38
North Central	(238)	70%	69	68	63	60	49	38
South	(245)	67%	65	65	60	59	47	39
West	(106)	80%	80	74	76	67	54	54

Primary solution responsibility

CONSUMERS PLACED THE MAJORITY OF THE RESPONSIBILITY FOR SOLVING THE GARBAGE PROBLEM ON THEMSELVES.

Previously, shoppers told us that they were very responsible for finding a solution, along with manufacturers and government. But when we asked them who should be most responsible, 30% of them said they themselves were.

Manufacturers and the federal government were each viewed as the primary party responsible for solutions by 18% of the shoppers, followed by local government (12%), and state government (9%). Educators and grocers were given the least responsibility, at 2% and 1% respectively.

College educated shoppers were harder on manufacturers and easier on the federal government than less educated shoppers were, as were women when compared to men, and employed shoppers vs. non-employed.

Respondents in the North Central region and in the West were more likely to place the responsibilities on manufacturers, while those in the Northeast and South were more likely to name the federal government for primary responsibility.

Those shoppers who were least likely to take responsibility themselves for the solution were more likely to be:

- In one person households (25%)
- 50 years and older (25%)
- With an annual income under $20,000 (22%)
- High school educated or less (27%)
- Taxed for garbage pick up (25%)
- Men (26%)
- Living in the Northeast (27%)

TABLE 23

PRIMARY RESPONSIBILITY

Q. 20: Who should be most responsible (for solving the garbage problem)?

(Table Reads Across)	(Base)	Consumers	Manufacturers	Federal Government	Local Government	State Government	Educators	Grocers
Total	(750)	30%	18	18	12	9	2	1
Recyclers	(483)	33%	18	17	10	9	1	1
Household size								
One	(124)	25%	16	17	15	9	2	2
Two	(255)	31%	18	13	11	11	2	1
Three or more	(362)	31%	18	20	11	8	1	1
Age								
Less than 35	(277)	33%	17	24	9	8	2	1
35 – 49	(223)	32%	23	15	10	9	1	—
50 and over	(218)	25%	14	12	17	10	2	2
Income								
Less than $20,000	(187)	22%	17	15	14	13	2	1
$20,000 – $34,999	(234)	35%	17	21	9	7	1	1
$35,000 or more	(240)	31%	21	19	10	8	3	1
Housing								
Single family	(516)	30%	18	17	11	8	2	1
Multiple family	(212)	30%	17	18	15	10	1	1
Own	(536)	30%	18	18	12	8	2	1
Rent	(199)	31%	17	16	12	13	2	1
Employed								
Full time/part time	(463)	32%	21	19	10	8	2	1
Not employed	(270)	27%	13	15	16	11	2	2
Education								
High school or less	(341)	27%	16	21	13	10	2	—
College or more	(394)	32%	20	14	11	8	2	2
Garbage fees								
Billed	(321)	34%	16	15	11	9	3	1
Taxed	(278)	25%	21	19	12	10	2	1
Not paid	(103)	38%	17	18	12	4	—	1
Sex								
Male	(175)	26%	14	21	14	9	3	2
Female	(575)	31%	19	16	11	9	2	1
Region								
Northeast	(161)	27%	17	25	10	6	1	2
North Central	(238)	30%	20	13	16	8	2	—
South	(245)	30%	12	20	11	11	2	1
West	(106)	33%	26	12	9	9	1	1

Suggested solutions for consumers

About 30% of the respondents felt that consumers should be primarily responsible for finding solutions to the garbage problem. The solution these people suggested most often was 'Learn to Recycle'.

The only other response which received a significant number of mentions was 'Require Government Regulations'.

Emphasis was on ways to handle the garbage we currently produce, and not on reducing the quantity we produce.

Q. 21 What should consumers do to find solutions to the garbage problem?

Base = Those who feel consumers should be primarily responsible	Total N = 224
Method of disposal (Net)	**53%**
Recycle/learn to recycle/choose recyclable products/encourage recycling	31%
Regulations/legislation/government control/involvement in disposal methods	11%
Separate/provide plans to separate recyclable from non-recyclable materials	8%
Set up/provide for recycling centers	6%
Enlightenment (Net)	**21%**
Educate people what to do/provide information	7%
Apply what we've learned/follow through	5%
Investigate/study/check into organizations/agencies	4%
Awareness (Net)	**21%**
Be more aware of problems/ways to dispose of garbage	9%
Make people more aware of recycling/recycling centers/recyclable materials	4%
Be more careful about what we make/production of waste	4%
Patronize businesses which act responsible	**5%**

Suggested solutions for manufacturers

As in the previous sections of this report, recyclability and package degradability are seen as the solutions to the problem. In this section, respondents who felt that manufacturers should shoulder the responsibility for solving the garbage problem said the manufacturers should do so through recyclable containers and degradable materials.

Only 5% of the respondents pointing the finger at manufacturers said they should be more careful about waste production.

Q.21 What should manufacturers do to find solutions to the garbage problem?

Base = Those who feel manufacturers should be primarily responsible	Total N = 132
Method of disposal (Net)	**55%**
Make recyclable containers/require products be packaged in recyclable containers	22%
Make biodegradable/require biodegradable material	19%
Recycle/learn to recycle/choose recyclable products/encourage recycling	11%
Set up/provide for recycling centers	4%
Enlightenment (Net)	**17%**
Do research on recycling/recyclable material/ testing system	8%
Investigate/study/check into organizations/agencies	4%
Research/keep doing research	3%
Awareness (Net)	**8%**
Be more careful about what we make/production of waste	5%
Reduce packaging/better packaging design/use paper packaging	**11%**

Suggested solutions for the federal government

Eighteen percent (18%) of the 750 respondents said that the federal government should find the solution to the garbage problem. The solution receiving the most mentions was government intervention through legislation and involvement in disposal methods.

Fourteen percent (14%) of those giving the responsibility to the federal government said they should encourage recycling.

Q. 21 What should the federal government do to find solutions to the garbage problem?

Base = Those who feel the federal government should be primarily responsible	Total N = 131
Method of disposal (Net)	**44%**
Regulation/legislation/government control/ involvement in disposal methods	21%
Recycle/learn to recycle/choose recyclable products/encourage recycling	14%
Make recyclable containers/require products be packaged in recyclable containers	5%
Set up/provide for recycling centers	5%
More/bigger land fills	5%
Enlightenment (Net)	**29%**
Research/keep doing research	11%
Educate people what to do/provide information	5%
Do research on recycling/recyclable materials/ testing system	5%

Personal effectiveness

Across all of the demographic groups we examined, shoppers indicated that they personally could have a positive effect on the garbage situation. On a scale of 1 to 10, where a "1" meant Very Ineffective and a "10" meant Very Effective, these shoppers rated their personal effectiveness in solving the garbage problem at 6.55 on average.

Some of the demographic groups, of course, saw themselves as more effective than other groups. Those who viewed themselves as more effective included:

- Larger households
- Respondents 35 years and over
- Respondents with incomes between $20,000 and $35,000
- Homeowners
- Those living in single family dwellings
- Those not currently employed
- Those taxed for garbage pick up
- Those living in the West

TABLE 24

PERSONAL EFFECTIVENESS

Q. 22: How effective do you believe you personally can be in helping solve the garbage problem?
(1 = Very Ineffective, 10 = Very Effective)

(Table Reads Across)	(Base)	Mean
Total	(750)	6.55
Recyclers	(483)	6.70
Household size		
One	(124)	6.44
Two	(255)	6.43
Three or more	(362)	6.64
Age		
Less than 35	(277)	6.44
35 – 49	(223)	6.60
50 and over	(218)	6.58
Income		
Less than $20,000	(187)	6.45
$20,000 – $34,999	(234)	6.66
$35,000 or more	(240)	6.51
Housing		
Single family	(516)	6.58
Multiple family	(212)	6.42
Own	(536)	6.61
Rent	(199)	6.40
Employed		
Full time/part time	(463)	6.51
Not employed	(270)	6.61
Education		
High school or less	(341)	6.55
College or more	(394)	6.54
Garbage fees		
Billed	(321)	6.49
Taxed	(278)	6.64
Not paid	(103)	6.58
Sex		
Male	(175)	6.43
Female	(575)	6.58
Region		
Northeast	(161)	6.58
North Central	(238)	6.40
South	(245)	6.54
West	(106)	6.85

Methodology

The data for this survey were collected from 750 completed interviews conducted between November 14 and November 18, 1989 by Marketing Research Services, Inc of Cincinnati, Ohio. Respondents were selected for the study by means of a national probability sample of telephone households in the continental United States. Survey participants were interviewed by telephone, and each household was screened by the following criteria to find qualified respondents:

- Primary food shopper for the household
- 18 years or older

There were two areas of questioning which could not be addressed in a telephone study. These areas were comprised of consumer preferences for various packaging alternatives, and a ranking of effective ways to manage garbage. These issues were covered in a mall intercept study in Cincinnati, Des Moines and Fredericksburg, VA in early January, 1990. A total of 391 interviews were conducted across these three cities.

Sampling variation

With any study, the results are subject to sampling variation, i.e., the difference between the survey results and those that would be gathered by studying the entire population. In general, the sampling variation is less when the size of the sample is large, and when the sample result approaches 0% or 100%, rather than being in a middle range.

For a sample of 750 interviews as in the telephone portion of this study, the sampling variation is estimated to be ± 4% at the 95% confidence level, or better.

DEMOGRAPHIC PROFILE OF RESPONDENTS

	Telephone Study (N = 750)	Mall Study (N = 391)
Sex		
Male	23%	16%
Female	77%	84%
Age		
Under 25	10%	17%
25 – 34	27%	29%
35 – 44	22%	28%
45 – 54	15%	11%
55 – 59	4%	4%
60 and over	18%	10%
Refused	4%	1%
Annual Income		
Under $15,000	14%	13%
$15,000 – $19,999	11%	11%
$20,000 – $24,999	12%	10%
$25,000 – $34,999	19%	19%
$35,000 – $49,999	19%	26%
$50,000 – $74,999	9%	12%
$75,000 and over	4%	5%
Don't know	4%	4%
Refused	8%	—

	Telephone Study (N = 750)	Mall Study (N = 391)
Residence Type		
Single family home	68%	65%
Duplex/townhouse	6%	7%
Apartment	15%	17%
Condominium	2%	2%
Mobile home	6%	7%
Other	1%	2%
Refused	2%	—
Own	71%	68%
Rent	27%	32%
Refused	2%	—
Employment		
Full time	47%	57%
Part time	15%	15%
Not employed	21%	20%
Retired	15%	7%
Refused	2%	1%
Education		
Grade school	6%	2%
High school	39%	40%
Some college	25%	29%
College graduate	19%	23%
Advanced degree	9%	6%
Refused	2%	—

	Telephone Study (N = 750)	Mall Study (N = 391)
Fees for Garbage		
Billed	43%	47%
Taxed	37%	12%
Don't pay	14%	41%
Don't know/refused	6%	—
Voted November 1989		
Yes	61%	67%
No	37%	33%
Refused	2%	—
Household Size		
1 – 2	51%	41%
3 – 4	37%	41%
5 or more	11%	18%
Refused	1%	—
Marital Status		
Married	64%	71%
Not married	34%	29%
Refused	2%	—

Appendix A

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Food Scraps?

(Table Reads Across)	(Base)	Put Out With Trash/ Garbage	Put Down Garbage Disposal	Give to Animals	Compost
Total	(750)	46%	23	22	5
Recyclers	(483)	44%	21	24	7
Household size					
One	(124)	56%	20	13	2
Two	(255)	48%	26	18	7
Three or more	(362)	41%	22	29	5
Age					
Less than 35	(277)	50%	21	26	3
35 – 49	(223)	39%	31	21	5
50 and over	(218)	48%	18	21	9
Income					
Less than $20,000	(187)	54%	11	25	4
$20,000 – $34,999	(234)	44%	23	25	4
$35,000 or more	(240)	40%	35	18	5
Housing					
Single family	(516)	42%	23	23	7
Multiple family	(212)	53%	24	20	1
Own	(536)	41%	23	24	7
Rent	(199)	56%	23	18	1
Employed					
Full time/part time	(463)	44%	26	22	5
Not employed	(270)	48%	19	24	6
Education					
High school or less	(341)	46%	18	26	5
College or more	(394)	45%	28	20	5
Garbage fees					
Billed	(321)	42%	23	26	6
Taxed	(278)	54%	24	15	3
Not paid	(103)	36%	25	28	8
Sex					
Male	(175)	50%	23	19	3
Female	(575)	44%	23	24	6
Region					
Northeast	(161)	60%	14	17	8
North Central	(238)	48%	27	16	5
South	(245)	39%	21	30	5
West	(106)	35%	35	27	4

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Aluminum Cans?

(Table Reads Across)	(Base)	Take to Recycle	Put Out With Trash/Garbage	Separate for Curbside Recycling
Total	(750)	43%	37	12
Recyclers	(483)	66%	11	18
Household size				
One	(124)	36%	36	10
Two	(255)	41%	38	14
Three or more	(362)	46%	36	11
Age				
Less than 35	(277)	43%	37	11
35 – 49	(223)	45%	37	12
50 and over	(218)	39%	38	13
Income				
Less than $20,000	(187)	41%	36	12
$20,000 – $34,999	(234)	46%	35	11
$35,000 or more	(240)	42%	39	13
Housing				
Single family	(516)	44%	36	12
Multiple family	(212)	41%	41	10
Own	(536)	44%	34	12
Rent	(199)	40%	43	11
Employed				
Full time/part time	(463)	45%	37	11
Not employed	(270)	40%	36	12
Education				
High school or less	(341)	41%	37	12
College or more	(394)	45%	36	11
Garbage fees				
Billed	(321)	51%	32	8
Taxed	(278)	35%	40	14
Not paid	(103)	40%	44	13
Sex				
Male	(175)	43%	35	13
Female	(575)	42%	38	11
Region				
Northeast	(161)	35%	37	21
North Central	(238)	40%	38	10
South	(245)	41%	44	7
West	(106)	65%	19	13

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Newspapers?

(Table Reads Across)	(Base)	Put Out With Trash/ Garbage	Take to Recycle	Burn	Separate for Curbside Recycling	Donate To Charity
Total	(750)	47%	20	9	9	7
Recyclers	(483)	30%	31	10	14	11
Household size						
One	(124)	52%	19	7	5	9
Two	(255)	47%	19	10	10	5
Three or more	(362)	44%	21	10	9	8
Age						
Less than 35	(277)	48%	22	6	6	6
35 – 49	(223)	48%	18	12	9	6
50 and over	(218)	44%	17	11	12	8
Income						
Less than $20,000	(187)	50%	18	9	5	7
$20,000 – $34,999	(234)	44%	18	12	6	10
$35,000 or more	(240)	45%	25	7	15	3
Housing						
Single family	(516)	44%	21	10	10	7
Multiple family	(212)	51%	17	8	6	7
Own	(536)	42%	21	12	10	7
Rent	(199)	56%	18	4	5	7
Employed						
Full time/part time	(463)	48%	21	9	7	6
Not employed	(270)	44%	17	10	12	9
Education						
High school or less	(341)	46%	13	12	10	8
College or more	(394)	46%	26	7	8	6
Garbage fees						
Billed	(321)	42%	24	11	7	8
Taxed	(278)	50%	18	5	12	5
Not paid	(103)	52%	16	15	5	9
Sex						
Male	(175)	49%	23	7	9	8
Female	(575)	46%	19	10	9	7
Region						
Northeast	(161)	40%	21	9	19	5
North Central	(238)	45%	22	11	5	8
South	(245)	57%	10	9	6	6
West	(106)	35%	36	5	9	9

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Cardboard?

(Table Reads Across)	(Base)	Put Out with Trash/Garbage	Burn	Take to Recycle
Total	(750)	69%	11	7
Recyclers	(483)	62%	12	10
Household size				
One	(124)	75%	7	6
Two	(255)	66%	12	6
Three or more	(362)	70%	12	8
Age				
Less than 35	(277)	75%	9	9
35 – 49	(223)	71%	12	5
50 and over	(218)	62%	12	6
Income				
Less than $20,000	(187)	67%	12	6
$20,000 – $34,999	(234)	68%	14	8
$35,000 or more	(240)	73%	8	6
Housing				
Single family	(516)	67%	12	8
Multiple family	(212)	75%	8	5
Own	(536)	65%	13	7
Rent	(199)	79%	6	7
Employed				
Full time/part time	(463)	72%	10	7
Not employed	(270)	66%	12	7
Education				
High school or less	(341)	66%	14	7
College or more	(394)	72%	8	7
Garbage fees				
Billed	(321)	67%	13	9
Taxed	(278)	74%	5	6
Not paid	(103)	72%	15	4
Sex				
Male	(175)	73%	9	10
Female	(575)	68%	12	6
Region				
Northeast	(161)	67%	9	9
North Central	(238)	67%	13	7
South	(245)	75%	11	2
West	(106)	65%	9	13

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Plastic Containers?

(Table Reads Across)	(Base)	Food Products		Non-Food Products
		Put Out with Trash/Garbage	Take to Recycle	Put Out with Trash/Garbage
Total	(750)	75%	9	88%
Recyclers	(483)	68%	14	83%
Household size				
One	(124)	83%	7	85%
Two	(255)	76%	8	88%
Three or more	(362)	71%	10	88%
Age				
Less than 35	(277)	77%	9	89%
35 – 49	(223)	75%	11	89%
50 and over	(218)	73%	7	84%
Income				
Less than $20,000	(187)	78%	6	86%
$20,000 – $34,999	(234)	77%	7	89%
$35,000 or more	(240)	72%	13	90%
Housing				
Single family	(516)	74%	10	88%
Multiple family	(212)	76%	8	87%
Own	(536)	71%	10	85%
Rent	(199)	83%	6	93%
Employed				
Full time/part time	(463)	76%	9	89%
Not employed	(270)	73%	8	86%
Education				
High school or less	(341)	76%	8	87%
College or more	(394)	73%	10	88%
Garbage fees				
Billed	(321)	73%	12	88%
Taxed	(278)	77%	7	89%
Not paid	(103)	75%	4	85%
Sex				
Male	(175)	80%	11	87%
Female	(575)	11%	8	88%
Region				
Northeast	(161)	69%	12	87%
North Central	(238)	72%	12	88%
South	(245)	82%	2	87%
West	(106)	71%	11	89%

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Yard Waste?

(Table Reads Across)	(Base)	Put Out with Trash/Garbage	Compost	Burn
Total	(750)	37%	31	9
Recyclers	(483)	33%	37	9
Household size				
One	(124)	36%	25	5
Two	(255)	36%	32	7
Three or more	(362)	38%	32	12
Age				
Less than 35	(277)	38%	24	10
35 – 49	(223)	33%	35	11
50 and over	(218)	38%	36	7
Income				
Less than $20,000	(187)	37%	27	11
$20,000 – $34,999	(234)	37%	28	9
$35,000 or more	(240)	34%	34	8
Housing				
Single family	(516)	37%	38	10
Multiple family	(212)	35%	14	7
Own	(536)	34%	38	10
Rent	(199)	43%	12	5
Employed				
Full time/part time	(463)	37%	31	9
Not employed	(270)	36%	32	9
Education				
High school or less	(341)	35%	32	11
College or more	(394)	38%	30	7
Garbage fees				
Billed	(321)	35%	40	9
Taxed	(278)	46%	22	7
Not paid	(103)	24%	21	11
Sex				
Male	(175)	35%	34	7
Female	(575)	37%	30	10
Region				
Northeast	(161)	33%	35	5
North Central	(238)	36%	31	10
South	(245)	36%	29	12
West	(106)	44%	29	6

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of _____?

(Table Reads Across)	(Base)	Plastic Bags: Put Out With Trash/ Garbage	Plastic Bags: Save/ Re-use	Paper Bags: Put Out With Trash/ Garbage	Paper Bags: Save/ Re-use	Burn
Total	(750)	76%	14	57%	22	8
Recyclers	(483)	70%	15	49%	24	9
Household size						
One	(124)	74%	17	62%	27	2
Two	(255)	73%	15	55%	21	10
Three or more	(362)	78%	12	56%	20	9
Age						
Less than 35	(277)	79%	12	61%	22	5
35 – 49	(223)	78%	14	60%	17	9
50 and over	(218)	68%	17	51%	28	10
Income						
Less than $20,000	(187)	70%	18	48%	28	9
$20,000 – $34,999	(234)	75%	13	60%	20	11
$35,000 or more	(240)	82%	10	61%	19	5
Housing						
Single family	(516)	75%	14	55%	23	9
Multiple family	(212)	77%	13	63%	18	6
Own	(536)	74%	14	54%	22	10
Rent	(199)	78%	15	64%	23	4
Employed						
Full time/part time	(463)	77%	13	59%	23	7
Not employed	(270)	73%	16	53%	21	10
Education						
High school or less	(341)	75%	14	57%	20	11
College or more	(394)	75%	14	56%	24	6
Garbage fees						
Billed	(321)	75%	14	55%	23	9
Taxed	(278)	76%	15	63%	21	3
Not paid	(103)	74%	10	52%	21	15
Sex						
Male	(175)	81%	9	66%	17	5
Female	(575)	74%	16	54%	24	9
Region						
Northeast	(161)	74%	14	56%	23	7
North Central	(238)	81%	9	54%	23	8
South	(245)	74%	15	64%	18	9
West	(106)	69%	21	48%	29	9

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of _____?

(Table Reads Across)	(Base)	Styrofoam® Put Out With Trash/ Garbage	Glass Bottles/Jars Put Out With Trash/ Garbage	Take to Recycle	Separate for Curbside Recycling	Save/ Re-use
Total	(750)	78%	70%	13	6	6
Recyclers	(483)	74%	58%	20	10	7
Household size						
One	(124)	77%	69%	11	4	7
Two	(255)	77%	68%	12	7	6
Three or more	(362)	79%	71%	14	6	6
Age						
Less than 35	(277)	81%	69%	13	6	7
35 – 49	(223)	81%	74%	13	5	5
50 and over	(218)	72%	67%	12	9	5
Income						
Less than $20,000	(187)	76%	72%	10	6	6
$20,000 – $34,999	(234)	78%	71%	13	4	6
$35,000 or more	(240)	81%	70%	15	7	6
Housing						
Single family	(516)	77%	70%	14	6	6
Multiple family	(212)	80%	71%	11	6	5
Own	(536)	75%	69%	13	7	6
Rent	(199)	84%	72%	12	3	7
Employed						
Full time/part time	(463)	80%	70%	14	4	7
Not employed	(270)	75%	69%	12	9	4
Education						
High school or less	(341)	76%	72%	10	7	7
College or more	(394)	79%	68%	15	6	6
Garbage fees						
Billed	(321)	79%	70%	15	5	7
Taxed	(278)	82%	68%	13	8	5
Not paid	(103)	70%	70%	8	2	8
Sex						
Male	(175)	83%	71%	15	6	5
Female	(575)	76%	69%	12	6	6
Region						
Northeast	(161)	77%	56%	16	16	5
North Central	(238)	76%	69%	16	3	5
South	(245)	79%	82%	4	2	8
West	(106)	80%	63%	20	8	6

METHODS OF SOLID WASTE DISPOSAL

Q. 2: How do you dispose of Magazines?

(Table Reads Across)	(Base)	Put Out With Trash/ Garbage	Take to Recycle	Donate to Charity	Save/ Re-use
Total	(750)	51%	11	11	10
Recyclers	(483)	41%	17	14	9
Household size					
One	(124)	54%	8	13	8
Two	(255)	53%	8	13	8
Three or more	(362)	47%	14	9	11
Age					
Less than 35	(277)	55%	13	7	11
35 – 49	(223)	51%	13	9	12
50 and over	(218)	48%	6	17	8
Income					
Less than $20,000	(187)	51%	9	11	8
$20,000 – $34,999	(234)	51%	11	12	11
$35,000 or more	(240)	55%	15	7	11
Housing					
Single family	(516)	50%	11	12	10
Multiple family	(212)	53%	11	8	9
Own	(536)	49%	11	12	10
Rent	(199)	55%	12	8	11
Employed					
Full time/part time	(463)	53%	13	9	10
Not employed	(270)	48%	9	13	9
Education					
High school or less	(341)	52%	7	10	10
College or more	(394)	50%	15	11	10
Garbage fees					
Billed	(321)	49%	13	12	11
Taxed	(278)	52%	12	8	10
Not paid	(103)	57%	7	12	9
Sex					
Male	(175)	54%	14	9	6
Female	(575)	50%	10	12	11
Region					
Northeast	(161)	50%	14	12	8
North Central	(238)	52%	10	11	11
South	(245)	53%	7	11	11
West	(106)	45%	21	10	7

Appendix B

RECYCLED CONTAINERS

Q. 10-11: If the label on a (food/non-food) product said that the package was made from recycled materials, would you be much more likely to try it (5), a little more likely (4), a little less likely (3), much less likely (2), or not influenced by the label at all (1)?

		Much More Likely to Buy (5)		A Little More Likely (4)		A Little Less Likely (3)		Much Less Likely to Buy (2)		Not Influenced By the Label (1)		Mean	
(TableReads Across)	(Base)	Food	Non-food	Food	Non-food	Food	Non-food	Food	Non-food	Food	Non-food	Food	Non-food
Total	(750)	23%	30	20	21	11	4	7	3	37	39	2.83	3.01
Recyclers	(483)	27%	33	20	23	10	2	6	3	33	35	3.01	3.16
Household size													
One	(124)	24%	32	20	27	8	4	9	3	34	30	2.92	3.28
Two	(255)	26%	34	16	18	13	3	6	2	36	40	2.90	3.04
Three or more	(362)	20%	27	22	22	10	5	8	3	39	41	2.76	2.91
Age													
Less than 35	(277)	20%	27	22	22	8	3	4	2	43	44	2.70	2.86
35 – 49	(223)	22%	30	24	25	10	5	8	2	34	36	2.94	3.11
50 and over	(218)	25%	34	13	18	16	5	9	4	33	35	2.88	3.12
Income													
Less than $20,000	(187)	22%	30	16	16	17	6	8	4	34	40	2.83	2.92
$20,000 – $34,999	(234)	24%	30	20	26	10	3	6	2	38	37	2.86	3.09
$35,000 or more	(240)	21%	28	25	23	7	3	5	2	40	42	2.83	2.93
Housing													
Single family	(516)	22%	30	21	22	11	4	7	3	37	39	2.84	3.02
Multiple family	(212)	26%	31	18	22	9	5	5	2	39	38	2.84	3.07
Own	(536)	23%	32	20	21	11	3	7	2	36	38	2.88	3.06
Rent	(199)	22%	27	19	23	9	7	7	4	41	40	2.75	2.93
Employed													
Full time/Part time	(463)	22%	29	22	23	9	4	7	2	38	40	2.83	3.00
Not employed	(270)	24%	32	16	19	14	4	7	3	36	37	2.84	3.05
Education													
High school or less	(341)	18%	26	16	20	17	6	7	4	38	43	2.69	2.82
College or more	(394)	27%	35	23	23	5	3	7	2	37	35	2.97	3.20
Garbage Fees													
Billed	(321)	23%	30	21	22	10	4	8	3	35	38	2.90	3.03
Taxed	(278)	21%	29	22	23	10	4	6	3	38	40	2.83	2.99
Not Paid	(103)	25%	35	14	16	12	4	6	3	42	41	2.74	3.01
Sex													
Male	(175)	20%	23	19	20	3	3	5	2	50	48	2.53	2.66
Female	(575)	24%	32	20	22	13	4	8	3	33	36	2.92	3.11
Region													
Northeast	(161)	24%	35	19	21	8	6	8	3	37	33	2.86	3.23
North Central	(238)	22%	32	23	20	10	4	7	3	37	39	2.85	3.04
South	(245)	20%	26	15	20	14	4	8	2	41	45	2.63	2.79
West	(106)	29%	28	25	28	9	2	5	3	31	35	3.16	3.13

Appendix C

SOLUTION RESPONSIBILITY

Q. 19: How responsible should _____ be for solving the garbage problem?

		Consumers			Local Government			Manufacturers			State Government		
(TableReads Across)	(Base)	Very	Somewhat	Not At All	Very	Somewhat	Not At All	Very	Somewhat	Not At All	Very	Somewhat	Not At All
Total	(750)	70%	27	2	69%	28	2	68%	28	3	65%	31	3
Recyclers	(483)	73%	24	1	69%	28	2	69%	27	3	65%	31	3
Household size													
One	(124)	72%	27	—	69%	28	2	69%	25	4	65%	29	3
Two	(255)	71%	25	2	68%	29	2	67%	29	2	60%	34	5
Three or more	(362)	69%	30	1	70%	28	2	67%	30	3	69%	29	2
Age													
Less than 35	(277)	67%	31	1	71%	27	2	67%	29	3	67%	31	2
35 – 49	(223)	70%	28	2	67%	31	2	66%	32	1	65%	32	3
50 and over	(218)	75%	22	1	70%	27	3	70%	23	4	63%	29	5
Income													
Less than $20,000	(187)	68%	29	1	70%	28	2	71%	23	4	64%	29	4
$20,000 – $34,999	(234)	73%	26	1	68%	30	1	68%	30	2	65%	33	2
$35,000 or more	(240)	70%	28	1	72%	25	3	67%	31	2	65%	31	5
Housing													
Single family	(516)	70%	27	2	68%	29	2	67%	30	3	63%	33	3
Multiple family	(212)	70%	27	1	72%	26	2	69%	26	3	69%	26	4
Own	(536)	72%	26	2	67%	30	2	68%	29	3	63%	32	4
Rent	(199)	65%	32	2	75%	22	3	67%	29	3	71%	26	3
Employed													
Full time/Part time	(463)	68%	29	2	69%	29	2	67%	31	2	65%	32	3
Not employed	(270)	74%	23	1	70%	27	3	69%	24	4	65%	27	4
Education													
High school or less	(341)	71%	27	2	70%	28	2	68%	27	3	65%	29	4
College or more	(394)	70%	28	1	69%	28	2	68%	30	2	65%	32	3
Garbage Fees													
Billed	(321)	72%	27	1	63%	35	2	67%	30	2	58%	39	2
Taxed	(278)	68%	29	1	76%	23	2	68%	27	4	71%	25	3
Not Paid	(103)	69%	28	2	72%	25	3	69%	29	1	70%	25	5
Sex													
Male	(175)	63%	32	3	67%	30	2	67%	29	3	62%	33	5
Female	(575)	72%	26	1	69%	28	2	68%	28	3	66%	31	3
Region													
Northeast	(161)	67%	28	3	69%	29	2	68%	29	2	67%	29	3
North Central	(238)	70%	28	1	69%	30	1	68%	29	2	63%	33	3
South	(245)	67%	30	2	65%	31	3	65%	30	4	60%	34	5
West	(106)	80%	20	—	80%	18	2	74%	23	3	76%	20	4

SOLUTION RESPONSIBILITY

Q. 19: How responsible should _____ be for solving the garbage problem?

		Federal Government			Educators			Grocers		
(TableReads Across)	(Base)	Very	Somewhat	Not At All	Very	Somewhat	Not At All	Very	Somewhat	Not At All
Total	(750)	62%	30	6	49%	40	9	40%	46	12
Recyclers	(483)	62%	31	6	51%	39	8	42%	46	11
Household size										
One	(124)	62%	27	10	51%	36	7	45%	42	9
Two	(255)	58%	32	8	53%	36	9	40%	42	16
Three or more	(362)	65%	31	3	45%	44	9	39%	51	9
Age										
Less than 35	(277)	69%	28	3	46%	43	9	35%	52	12
35 – 49	(223)	58%	35	6	45%	45	9	40%	46	13
50 and over	(218)	60%	28	9	56%	31	8	47%	39	10
Income										
Less than $20,000	(187)	62%	31	5	48%	36	10	43%	40	14
$20,000 – $34,999	(234)	66%	27	6	45%	47	8	41%	49	9
$35,000 or more	(240)	63%	29	8	53%	37	8	36%	50	12
Housing										
Single family	(516)	63%	31	5	48%	42	8	39%	48	11
Multiple family	(212)	63%	27	9	51%	36	9	45%	40	13
Own	(536)	61%	31	6	49%	39	9	40%	47	11
Rent	(199)	66%	27	6	48%	42	9	42%	45	13
Employed										
Full time/Part time	(463)	62%	31	5	47%	42	10	38%	48	13
Not employed	(270)	63%	28	7	52%	36	7	44%	42	9
Education										
High school or less	(341)	65%	27	5	48%	38	9	41%	44	12
College or more	(394)	61%	32	7	50%	41	8	40%	48	11
Garbage Fees										
Billed	(321)	56%	35	6	49%	40	8	39%	46	12
Taxed	(278)	69%	26	4	47%	43	9	41%	48	10
Not Paid	(103)	65%	25	9	56%	33	9	42%	43	14
Sex										
Male	(175)	53%	34	11	49%	36	14	37%	45	19
Female	(575)	65%	29	5	48%	41	7	42%	46	9
Region										
Northeast	(161)	67%	29	3	47%	42	7	38%	47	13
North Central	(238)	60%	29	8	49%	39	9	38%	52	8
South	(245)	59%	34	7	47%	41	9	39%	45	14
West	(106)	67%	27	5	54%	36	9	54%	33	11

Appendix D

Appendix D

Region Definitions

NORTHEAST

Connecticut
Maine
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

NORTH CENTRAL

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

SOUTH

Alabama
Arkansas
Delaware
District of Columbia
Florida
Georgia
Kentucky
Louisiana
Maryland
Mississippi
North Carolina
Oklahoma
South Carolina
Tennessee
Texas
Virginia
West Virginia

WEST

Arizona
California
Colorado
Idaho
Montana
Nevada
New Mexico
Oregon
Utah
Washington
Wyoming